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THE AMPHIBIANS AND REPTILES
OF AFGHANISTAN,
A CHECKLIST AND KEY TO THE
HERPETOFAUNA

By

Alan E. Leviton and Steven C. Anderson
California Academy of Sciences, San Francisco 94118

In 1950 the Academy received a collection of reptiles from Afghanistan. Though small, the collection was of considerable interest, having come from a little-visited region of the Dasht-i-Margo desert. It was reported on by Leviton in 1959. Subsequently, significant collections of Afghanistan reptiles have been made, notably by John Gasperetti in 1961 (Leviton and Anderson, 1961a and 1963), Richard and Erica Clark in 1964 and 1968 (Clark, Clark, Anderson and Leviton, 1969, and Clark and Clark, in preparation [for 1968 collections]), and the William Street Expedition of the Field Museum of Natural History in 1965 (Anderson and Leviton, 1969). These, together with new materials acquired by other museums, some of which we have seen, have formed the basis of the following preliminary attempt at a checklist and key to the herpetofauna of the entire country.

The growth of knowledge about the Afghan herpetofauna may be measured by the fact that in 1959 Leviton included 67 nominal species in his checklist. One additional species, *Calotes versicolor*, an error of omission at that time, should have been included to bring the total to 68. In the accompanying key and checklist, 101 nominal species and subspecies are listed, an increase of 50

percent in the number of species currently known from that country. Of the 33 new additions, five have been described as new since 1960. We believe it safe to say that our knowledge of the Afghan herpetofauna is still very incomplete and we expect that many interesting animals remain to be discovered, especially in the mountains of the Hindu Kush.

We must emphasize that problems exist. For example, we are not satisfied with our treatment of the species of *Eryx*, *Cyrtodactylus*, or those of the genus *Coluber*. However, rather than postpone publication of this work indefinitely until all problems are solved, an unlikely event in any case, we beg the indulgence of our colleagues and hope they will find this account useful as a point of departure for extending their own researches.

We have included in both the key and the checklist several nominal species whose presence in Afghanistan, though reasonable to expect, has yet to be authenticated. In the key these species are indicated by having an asterisk (*) immediately following the name; in the checklist the asterisk precedes the name.

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In 1969 one of us (SCA) received a grant from the American Philosophical Society to facilitate the examination of Southwest Asian specimens in the U. S. National Museum, the American Museum of Natural History, and the Field Museum of Natural History. This trip also permitted the testing and revision of keys and so upgraded this work.

KEY TO THE AMPHIBIANS AND REPTILES OF AFGHANISTAN

1. Body, and limbs (if present), covered with scales or a shell (reptiles)	2
Body and limbs without scales or shell (amphibians)	4
2. Shell present (turtles)	<i>Testudo horsfieldii</i>
Shell absent	3
3. Limbs absent, eyes without movable lids (snakes)	79
Limbs present, or if absent, eyes with movable lids (lizards)	9
4. Tail present in fully metamorphosed individuals; hind limbs approximately same length as forelimbs; larvae resembling adults, possessing teeth in both jaws (salamanders)	<i>Batrachuperus mustersi</i>
Tail absent in fully metamorphosed individuals; hind limbs considerably longer than forelimbs; larvae unlike adults, never possessing true teeth until metamorphosis (frogs and toads)	5
5. Large, raised gland (paratoid) between shoulder and eye; no maxillary teeth	6
Paratoid gland absent; maxillary teeth present	7
6. Tarsal ridge well developed, smooth; tympanum, when distinct, about half or less than half diameter of eye	<i>Bufo viridis</i>
Tarsal ridge marked by small tubercles; tympanum $\frac{2}{3}$ diameter of eye ...	<i>Bufo andersonii</i>
7. Skin of back with thickened dorsolateral ridge on each side; frequently with light vertebral stripe; toes not fully webbed (terminal phalanx of 4th toe free of web)	<i>Rana ridibunda</i>
Back without dorsolateral ridges; usually no light vertebral stripe; toes fully webbed	8
8. Tympanum as large as eye or larger; heel reaching anterior to eye; prominent light stripe on hinder surface of thigh; males with external vocal sacs; males without pectoral glandular areas (mammata)	<i>Rana cyanophlyctis</i>
Tympanum smaller than eye; heel not reaching anterior to eye; no prominent light stripe on hinder surface of thigh; males without external vocal sacs; males with prominent pectoral glandular areas (mammata)	<i>Rana sternosignata</i>
9. Limbs absent; eyelids movable; deep longitudinal fold on each side of body	<i>Ophisaurus apodus</i>
Limbs present	10
10. Pupil of eye vertically elliptical; skin soft, with granules, rarely imbricate scales, no paired shields on top of head, which is covered by granules; neither suborbital nor frontosquamosal arch present on skull; clavicles broadened, forming loop at inner end; tongue smooth or covered by threadlike papillae (geckos)	11
Pupil of eye round or slightly oval; skin covered by scales, plates, or granules, not soft; if head not covered by paired plates, then by juxtaposed scales or granules; either suborbital and/or frontosquamosal arch present on skull; clavicles not broadened at inner end, or if clavicles broadened, tongue covered by imbricate, scalelike papillae, or by oblique folds	28
11. Eyelids movable; digits not dilated; procoelous vertebrae	<i>Eublepharis macularius</i>
Eyelids immovable (spectacle); digits dilated or not; amphicoelous vertebrae	12

12.	Digits with expanded subdigital lamellae forming pads, lamellae paired	<i>Hemidactylus flaviviridis</i>	
	Digits without expanded subdigital lamellae; lamellae not divided		13
13.	Digits with well defined lateral, comblike, flexible fringe of pointed scales		14
	Digits without lateral fringe of pointed scales, though scales may be denticulate, forming serrate border		19
14.	Dorsal scales small, granular or imbricate, intermixed with larger rounded tubercles		15
	Dorsal scales large, uniform, cycloid, imbricate		17
15.	Back with small, irregular, dark spots and dots; dorsolateral dark stripe extending from behind eye to just beyond forelimb or about $\frac{1}{3}$ distance between fore- and hind limbs; tail with dark blotches above	<i>Crossobamon evermanni</i>	
	Back with dark crossbars or longitudinal stripes		16
16.	Back with dark crossbars; hind limb reaching beyond axilla; ventral scales smooth	<i>Crossobamon lumsdeni</i>	
	Back with longitudinal stripes (or dots arranged in regular longitudinal rows); hind limb reaching axilla; ventral scales keeled; dorsolateral stripe extending from behind eye to, or almost to, insertion of hind limb; light dorsal stripe extending length of posterior $\frac{2}{3}$ of tail, bordered by serrated brown dorsolateral stripes	<i>Crossobamon maynardi</i>	
17.	Cycloid scales on back extending on to hinder part of head	<i>Teratoscincus scincus</i>	
	Cycloid scales on back not extending beyond shoulders		18
18.	Cycloid scales on back feebly imbricate; about 100 scales round middle of body	<i>Teratoscincus microlepis</i>	
	Cycloid scales on back strongly imbricate; about 50 scales round middle of body	<i>Teratoscincus bedriagai</i>	
19.	Dorsal scales uniform, small, juxtaposed; granular, without enlarged tubercles present (Afghanistan specimens only)	<i>Alsophylax pipiens</i>	
	Enlarged dorsal tubercles present among granular scales		20
20.	Chin shields (postmentals) absent		21
	Chin shields present		22
21.	Tail tapering gradually, covered below by small scales only; subdigital lamellae with several small tubercles, or denticulate on distal margin	<i>Bunopus tuberculatus</i>	
	Tail cylindrical, very slender, of almost uniform diameter from base to tip, with median series of enlarged subcaudal plates; subdigital lamellae smooth	<i>Agamura persica</i>	
22.	Rostral excluded from border of nostril	<i>Agamura femoralis</i>	
	Rostral forming anterior border of nostril		23
23.	Tubercles usually present among granules of lower surface of thigh, in short row of 1-6, some often in contact with posterior row of large imbricate scales; males with continuous series of preanal and femoral pores		24
	No subfemoral tubercles; males with preanal pores only		26
24.	37-40 abdominal scales across middle of belly (19-25 in distance across belly equal to length of snout); series of pores separated on midline by 1-2 scales not containing pores; 35-46 pores in males (total of both sides)	<i>Cyrtodactylus</i> species	
	23-34 abdominal scales across middle of belly (10-16 in distance across belly equal to length of snout); no separation between right and left series of pores; 24-41 pores in males (total of both sides)		25
25.	24-29 strongly keeled, nonmucronate trihedral or subtrihedral tubercles in para-		

	vertebral row from occiput to level of vent; males with 28-41 (32-40 in Afghan specimens examined) preanal and femoral pores (total of both sides)	
	<i>Cyrtodactylus fedtschenkoi</i>
	20-23 strongly keeled, distinctly mucronate trihedral tubercles in paravertebral row from occiput to level of vent; males with 23-31 (24-29 in Afghan specimens examined) preanal and femoral pores (total of both sides) —	<i>Cyrtodactylus caspius</i>
26.	Subcaudal scales 1 head-width behind vent small, not enlarged and platelike (in distal part of tail, more than 2 head-widths posterior to vent, median series becomes enlarged, but much narrower than width of tail); tubercles on dorsal surface of tail arranged around middle of each caudal segment, not in terminal scale row	<i>Cyrtodactylus russowii</i> *
	Subcaudal scales 1 head-width behind vent enlarged, platelike, in single median series covering nearly full width of tail; tubercles on dorsal surface of tail forming terminal ring of each caudal segment	27
27.	25-47 abdominal scales across middle of belly (more than 12 scales across belly in distance equal to length of snout)	<i>Cyrtodactylus watsoni</i>
	15-23 abdominal scales across middle of belly (7-10 scales across belly in distance equal to length of snout)	<i>Cyrtodactylus scaber</i>
28.	No large paired shields on top of head, which is covered by granules or small scales or tubercles	29
	Enlarged paired plates on top of head (some granules may be present, but enlarged shields predominate)	54
29.	Venter covered by imbricate scales, not granules; tongue broad and short, smooth or covered with villose papillae, not deeply forked; dorsum covered by imbricate scales or combination of imbricate scales and granules (agamids)	30
	Venter covered by small granules or juxtaposed quadrangular scales; tongue deeply divided, long and slender, smooth, retractile into sheath at base; dorsum covered with numerous small granules or juxtaposed scales (varanids)	53
30.	Well marked dorsal crest, at least on neck	<i>Calotes versicolor</i>
	No dorsal crest	31
31.	Femoral pores present; tail strongly depressed through most of length, dorsal surface of tail with transverse rows of very large spinous tubercles rounded at base	32
	Femoral pores absent; tail depressed only at base, without transverse rows of very large spinous tubercles rounded at base, although rings of large spiny scales may be present, forming more or less distinct caudal segments	33
32.	Back without greatly enlarged pointed tubercles; caudal spines small, 20-24 in cross-series at base of tail	<i>Uromastix hardwickii</i>
	Back with transverse series of large pointed tubercles; caudal spines large, 8-10 in cross-series at base of tail	<i>Uromastix asmussi</i>
33.	Tympanum exposed, i.e. ear opening visible	34
	Tympanum concealed or absent, no visible external ear opening	45
34.	Caudal scales in oblique rows, not forming rings; tympanum deeply sunk	35
	Caudal scales forming more or less distinct rings; tympanum large, superficial	36
35.	Dorsal scales subequal in size and disposed in regular rows	<i>Agama agilis</i>
	Dorsal scales unequal, large dorsal scales twice as large as smallest, irregularly arranged	<i>Agama rudrata megalonyx</i>
36.	Enlarged dorsal scales smooth or faintly keeled	37
	Enlarged dorsal scales strongly keeled	39



37. Caudal segments with 2 whorls of scales 2 head-widths posterior to vent
 *Agama caucasica*
 Caudal segments with 3 whorls of scales 2 head-widths posterior to vent, or seg-
 mentation of tail indistinct 38
38. 19-24 scales around tail at level of 5th complete whorl; scales on flanks distinctly
 larger than ventral and dorsolateral scales *Agama badakhshana*
 25-35 scales around tail at level of 5th complete whorl; scales on flanks small, not
 larger than ventrals, grading into granular dorsolateral scales *Agama himalayana*
39. Caudal scales small, 30 or more in whorl 5 rows posterior to vent 40
 Caudal scales large, usually less than 30 in whorl 5 rows posterior to vent 41
40. Forelimb and tibial portion of hind limb covered above with scattered, greatly
 enlarged spinous scales surrounded by much smaller or granular scales, large
 scales neither grouped in patches nor imbricate; largest scales on dorsum twice
 as large as largest ventral scales, vertebral and paravertebral groups of scales
 heterogeneous *Agama nuristanica*
 Forelimb and tibial portion of hind limb covered with regularly arranged, enlarged
 imbricate and strongly keeled scales; largest scales on dorsum not larger than
 ventrals, vertebral and paravertebral groups of scales homogeneous
 *Agama tuberculata*
41. Flanks lacking enlarged scales *Agama nupta*
 Flanks with numerous enlarged scales intermixed with smaller scales 42
42. Scales of chest and throat strongly keeled and mucronate *Agama erythrogastra*
 Scales of chest and throat smooth or weakly keeled, not mucronate 43
43. Each caudal segment 1 head-length posterior to vent, with 2 whorls of scales
 *Agama caucasica*
 Each caudal segment 1 head-length posterior to vent with 3 whorls of scales 44
44. Scales on snout and forehead smooth or faintly keeled; large mid-dorsal scales in
 4 longitudinal rows, intermixed with smaller scales; greatly enlarged dorsolateral
 and flank scales in small, separate clusters forming longitudinal rows
 *Agama lehmanni*
 Scales on snout and forehead strongly keeled; large mid-dorsal scales in regular
 longitudinal rows not intermixed with smaller scales, though vertebral row of
 small scales may separate enlarged scale rows into 2 paravertebral groups; no
 greatly enlarged dorsolateral scales; enlarged flank scales forming large patch
 on mid-flank *Agama agorensis*
45. Large cutaneous fold at corner of mouth *Phrynocephalus mystaceus*
 No large cutaneous fold at corner of mouth 46
46. Dorsal scales heterogeneous, small scales intermixed with strongly enlarged scales 47
 Dorsal scales subequal, homogeneous (but in *P. reticulatus* clusters or single scales
 may appear to be of different size than surrounding scales because they are
 swollen and tubercular and with upraised posterior margins; if striking differ-
 ence is observed, see 47.) 48
47. Enlarged dorsal scales flat, not tubercular, posterior border not sharply upturned;
 sides of back of head and neck with long, flexible, spinous or fringelike scales;
 both sides of 4th toe with long, well developed fringes; tail without dark cross-
 bars, tip black on ventral surface in adults, in very small juveniles not black but
 with single black spot on ventral surface of tail *Phrynocephalus luteoguttatus*
 Some enlarged dorsal scales nail-like, large portion of scale raised free of back;
 sides of back of head and neck without long spinous or fringelike scales; 1 side

	of 4th toe with short fringe; tail with dark crossbars always present at least on ventral surface, tip not black	<i>Phrynocephalus scutellatus</i>	
48.	Flexible, fringelike scales prominent in temporal region		49
	No fringelike scales in temporal region		50
49.	No crossbars on tail, tip of tail black; large, prominent black spots on back and top of head, group of 4 especially conspicuous in scapular region	<i>Phrynocephalus euptilopus</i>	
	Tail with distinct black crossbars on ventral surface, tip black; no conspicuous large, black spots on dorsum	<i>Phrynocephalus interscapularis</i>	
50.	Nasal shields separated by 1-3 series of scales		51
	Nasal shields in contact or partly separated		52
51.	Scattered scales or clusters of scales on dorsum with upraised posterior margins, often swollen, tubercular; scales of upper surfaces of limbs and midline of back prominently keeled	<i>Phrynocephalus reticulatus boettgeri</i>	
	No upraised, swollen scales on dorsum; scales of upper surfaces of limbs and back smooth to indistinctly keeled in young, scales of limbs distinctly keeled in adults	<i>Phrynocephalus maculatus</i>	
52.	Distinct, dark-margined, light dorsolateral stripe from posterior angle of eye along body onto tail; single, very elongate suborbital scale 2-3 times as long as adjacent scales	<i>Phrynocephalus clarkorum</i>	
	No light stripe along side of body; 3 suborbital scales of about equal size	<i>Phrynocephalus ornatus</i>	
53.	Tail round in cross-section, or slightly compressed posteriorly, without double-toothed crest above; abdominal scales in 110-125 transverse series from collar fold to groin	<i>Varanus griseus</i>	
	Tail compressed, with low, double-toothed crest above; abdominal scales in 90-110 transverse series from collar fold to groin	<i>Varanus bengalensis</i>	
54.	Abdominal scales similar to dorsals; no femoral or preanal pores (skinks)		55
	Abdominal scales subquadrangular or quadrangular, in 8-18 longitudinal rows across venter, very distinct from dorsal granules; femoral pores present (except in <i>Eremias aporosceles</i>) (lacertids)		65
55.	Body elongate; limbs present but greatly reduced, 3-4 fingers, 3 toes		56
	Body not serpentine; 4-5 fingers, 5 toes		57
56.	Fingers 3	<i>Ophiomorus tridactylus</i>	
	Fingers 4	<i>Ophiomorus brevipes</i>	
57.	Lower eyelid scaly; palatine bones separated on midline of palate		58
	Lower eyelid with transparent disc or lids not movable; palatine bones meeting on midline of palate		60
58.	21-23 scales around body; postnasal present; single broad vertebral scale row, much broader than adjacent rows	<i>Eumeces taeniolatus</i>	
	26-30 scales around body; no postnasal; 2 median rows of dorsal scales broader than those on flanks		59
59.	1 azygous postmental	<i>Eumeces blythianus*</i>	
	2 azygous postmentals	<i>Eumeces schneideri</i>	
60.	Eyelids immovable (spectacle)		61
	Eyelids movable		63
61.	Ear hidden beneath scales	<i>Ablepharus grayanus*</i>	
	Ear opening small but distinct		62

62. Frontoparietal single *Ablepharus pannonicus*
 Frontoparietal divided *Ablepharus bivittatus lindbergi*
63. Supranasals absent; pterygoid bones in contact anteriorly, palatal notch not reaching to level of centers of eyes *Scincella himalayana*
 Supranasals present; pterygoid bones separated anteriorly, palatal notch extending forward to level of centers of eyes 64
64. Prefrontals separated; 16-22 lamellae beneath 4th toe; dorsal scales feebly tricarinate or smooth *Mabuya aurata**
 Prefrontals in contact; 12-16 lamellae beneath 4th toe; dorsal scales with 2-3 strong keels *Mabuya dissimilis*
65. Eyelids immovable; eye covered by spectacle *Ophisops jerdoni*
 Eyelids movable 66
66. Nostril between 2 nasals and 1st upper labial *Acanthodactylus cantoris* subspecies
 Nostril not in contact with 1st upper labial 67
67. Femoral pores absent *Eremias aporosceles*
 Femoral pores present 68
68. Ventral plates in straight longitudinal series; lower nasal resting on 1st upper labial only; occipital shield in contact with interparietal *Eremias guttulata watsonana*
 Ventral plates in oblique longitudinal series; lower nasal resting on 2-3 upper labials; occipital shield usually absent 69
69. Subocular bordering mouth 70
 Subocular not bordering mouth 75
70. Lateral scales of 4th toe in complete row length of toe, forming distinct fringe 71
 Lateral scales of 4th toe not forming distinct fringe 72
71. Broad dark dorsolateral stripe from nostril through eye, along body and side of tail on each side, 1-2 additional narrower dark stripes medial to these on each side, remainder of dorsal dark stripes interrupted and anastomosing to form reticulate pattern, evident even in very young specimens; 4th toe with 2 complete rows of subdigital scales, i.e. total of 4 scales counted around toe (except that extra scale may be present at a joint) *Eremias scripta*
 Dorsal pattern consisting of 7 dark stripes, outer dorsolateral stripes broadest, persisting unbroken in both adults and juveniles; 4th toe with single row of subdigital scales, i.e. total of 3 scales counted around toe (except that extra scale may be present at a joint) *Eremias lineolata*
72. Back with dark stripes broader than interspaces in young and adults; no light ocelli on flanks nor spots contained within dark stripes, nor any tendency for flank stripes to break up 73
 Back with dark stripes, breaking up into spots in adults; dark dorsolateral stripe containing white spots, or lateral and/or dorsolateral stripes breaking up into dark-margined ocelli 74
73. 4th toe with 2 complete rows of subdigital scales and complete row of sharply pointed lateral scales, i.e. total of 4 scales counted around penultimate phalanx; collar scales small, usually only single median collar scale distinctly larger than adjacent gular scales anterior to collar *Eremias fasciata*
 4th toe with single complete row of subdigital scales and complete row of lateral to ventrolateral scales, i.e. total of 3 scales counted around penultimate phalanx; usually several collar scales distinctly larger than adjacent gular scales anterior to collar *Eremias regeli*
74. Adults usually with black dorsolateral stripe, more or less continuous for at least

- major portion of its length, containing white spots, black stripe contrasting strongly with dorsal color pattern; juvenile with 4 dark stripes on dorsum between dorsolateral white-spotted stripes, vertebral stripe being white (dark stripes breaking up into 4 more or less regular rows of dark spots with age) *Eremias velox persica*
- Adults with dark interrupted dorsolateral black stripe forming ocelli with white spots, this dorsolateral pattern not contrasting strongly with interrupted dark stripes and spots of dorsum; juveniles with 3 dark stripes on dorsum between white-spotted dorsolateral stripes, vertebral stripe being black, bifurcated on neck (dark stripes breaking up into several irregular rows of dark spots with age) *Eremias velox velox*
75. 4th toe with distinct fringe on both lateral and medial sides, formed by complete row of sharply pointed lateral scales and complete row of similar medial scales; unguis lamellae of fingers and toes with prominent, flat, lateral expansions 76
- 4th toe without distinct fringe; unguis lamellae without prominent lateral expansion 77
76. Scales of flanks distinctly larger than those of back; largest series of scales on lower surface of tibia only slightly broader than adjacent scales ... *Eremias grammica*
- Scales of flanks not larger than those of back; series of broad plates on lower surface of tibia, more than twice as broad as adjacent scales *Eremias acutirostris*
77. 2 series of femoral pores narrowly separated, space between series not exceeding $\frac{1}{4}$ length of each *Eremias aria*
- 2 series of femoral pores widely separated, space between series at least $\frac{1}{3}$ length of each 78
78. 4th toe with single row of subdigital scales; usually distinct tympanic shield; 4th supraocular usually distinct *Eremias intermedia*
- 4th toe with 2 rows of subdigital scales, internal much larger; tympanic scale usually small or indistinct; 4th supraocular usually indistinct ... *Eremias nigrocellata*
79. Ventral scutes not enlarged, same size as adjacent scales; eyes small, covered by scales 80
- Ventral scutes transversely enlarged; eyes well developed 81
80. Scales in 22-24 rows around body *Typhlops vermicularis*
- Scales in 14 rows around body *Leptotyphlops blanfordi*
81. Ventral scutes narrower than full width of body; dorsal scale rows in more than 35 longitudinal rows at midbody (Genus *Eryx*¹) 82
- Ventral scutes as broad as full width of body; dorsal scales in 37 or less longitudinal rows 86
82. Longitudinal dorsal scale rows less than 43 *Eryx elegans*
- Longitudinal dorsal scale rows 43 or more 83
83. Width of interorbital space considerably greater than distance from posterior edge of eye to corner of mouth; front and upper surface of snout slightly convex; 2nd upper labial usually higher than 3rd; ventrals without spots, or with widely separated dark spots *Eryx jaculus**
- Width of interorbital space equal, less than, or slightly greater than distance from posterior edge of eye to corner of mouth; front and upper surface of snout not

¹ Six currently recognized species of *Eryx* have been reported by various authors from Southwest Asia. Of these five have been at one time or another suggested as occurring in Afghanistan. A revision of the genus *Eryx* is long overdue. In lieu of such a revision we have included the five nominal species in our key; however we doubt that either *E. jaculus* or *E. miliaris* occurs in Afghanistan. See checklist for further comments.

- convex; 2nd upper labial may be lower or higher than 3rd; ventrals as a rule with dark, confluent spots 84
84. Width of interorbital space considerably less than distance from posterior edge of eye to corner of mouth; eyes directed upward; scales on tail smooth or with scarcely detectable keels; 2nd upper labial usually lower than 3rd *Eryx miliaris**
- Width of interorbital space equal, slightly less than, or slightly greater than distance from posterior edge of eye to corner of mouth; eyes directed laterally; scales on tail with prominent keels, at least in adults 85
85. Scales on body smooth, those on tail and on sides near anal region keeled; end of tail much narrower than head; no distinct bands on body or tail, but dark blotches and irregular markings present *Eryx tataricus*
- Scales of body and tail more or less distinctly keeled; tail extremely blunt, often as wide as head; unicolored or with series of distinct dark bands on tail, sometimes on body, especially evident posteriorly *Eryx johnii*
86. Top of head covered by numerous small scales, none arranged to form regular large plates; enlarged fangs present 87
- Top of head covered by 8-9 large plates disposed in regular pattern; enlarged fangs present or absent 90
87. Lateral scales in oblique series 88
- Lateral scales in straight longitudinal series 89
88. Subcaudals single; keels of lateral scales serrated; ventrals without strong lateral keel *Echis carinatus*
- Subcaudals paired; keels of scales not serrated; ventrals with strong lateral keel *Eristicophis macmahoni*
89. Supraocular "horn" present, surrounded by small scales; supranasal sac present, opening into upper part of nostril *Pseudocerastes persicus**
- Supraocular "horn" absent; no supranasal sac *Vipera lebetina*
90. Facial pit present between nostril and eye 91
- No facial pit present 92
91. Temporals, posterior upper labials fused *Agkistrodon himalayanus*
- Temporals, posterior upper labials not fused *Agkistrodon halys*
92. Loreal absent, nasal shield in contact with preocular; dorsal scales in 19-25 longitudinal rows *Naja oxiana*
- Loreal present, nasal shield not in contact with preocular; if loreal absent, dorsal scales in less than 17 longitudinal rows 93
93. Series of subocular scales separating labials from eye border; scales in 27-33 longitudinal rows at midbody; 10-13 upper labials *Spalerosophis diadema*
- One or more upper labials bordering eye, or if subocular scales present excluding labials from eye border, then scales in less than 23 longitudinal rows 94
94. Scales in 15 longitudinal rows at midbody 95
- Scales in 17 or more longitudinal rows at midbody 96
95. Loreal usually absent; temporals 1+1; subcaudals more than 60; head, nape with black crossbars or entirely black above *Eirenis persica**
- Loreal present; temporals 1+2; subcaudals less than 60; brown crossbars on head chevron-shaped *Oligodon taeniolatus**
96. Dorsal scales keeled (except outer row usually smooth), in 19 longitudinal rows at midbody; ventrals less than 180; 1-2 anterior temporals 97
- Dorsal scales smooth, or if keeled, then ventrals more than 180, 2-3 anterior temporals 98

97.	1 anterior temporal	<i>Natrix tessellata</i>	
	2 anterior temporals	<i>Xenochrophis piscator</i>	
98.	Scales in 17 longitudinal rows at midbody		99
	Scales in 19-25 longitudinal rows at midbody		103
99.	Pupil of eye vertically elliptical; black above with white or yellowish cross-bars	<i>Lycodon striatus bicolor*</i>	
	Pupil of eye round; color not as described above		100
100.	Anal single; 1 anterior temporal; 8 upper labials	<i>Psammophis leithi*</i>	
	Anal divided; 2 anterior temporals; 9 upper labials		101
101.	No longitudinal stripes on body and tail; no longitudinal stripe through eye; maxillary teeth 20-38, posteriormost not grooved	<i>Ptyas mucosus</i>	
	Color pattern consisting of longitudinal stripes (sometimes indistinct); longitudinal dark stripe through eye; maxillary teeth 10-13, posteriormost enlarged, grooved		102
102.	Caudals 72-115; 3 labials entering eye (4th to 6th); well defined longitudinal markings on top of head	<i>Psammophis lineolatus</i>	
	Caudals 118-134; 2 labials entering eye (5th and 6th); markings on top of head broken up into smaller blotches and spots	<i>Psammophis schokari</i>	
103.	Scales in 19 longitudinal rows at midbody		104
	Scales in 21-25 longitudinal rows at midbody		108
104.	Pupil vertically elliptical, or if pupil <i>wide open</i> and rounded, then rostral projecting		105
	Pupil round; rostral broadly rounded		106
105.	Usually 1 prefrontal; anal single; at most 1 upper labial bordering eye	<i>Lytorhynchus ridgewayi</i>	
	2 prefrontals; anal divided; upper labials not bordering eye	<i>Lytorhynchus maynardi</i>	
106.	Subocular present; 1 upper labial bordering eye	<i>Coluber karelinii</i>	
	No suboculars; 2 upper labials or more bordering eye		107
107.	Scale rows 11-13 just anterior to vent; ventrals 205-244; subcaudals 124-136	<i>Coluber rhodorhachis</i>	
	Scale rows 13-15 just anterior to vent; ventrals 199-211; subcaudals 82-119	<i>Coluber ventromaculatus*</i>	
108.	Pupil vertically elliptical; anal single	<i>Boiga trigonata melanocephalus</i>	
	Pupil round; anal divided		109
109.	2 preoculars, 1 subocular; 21-23 scale rows at midbody; 9 (rarely 8 or 10) supralabials; posterior maxillary teeth longest; frontal with crescentic lateral margins	<i>Coluber ravergieri</i>	
	1 preocular, 1 small subocular; 23-25 scale rows at midbody; 8 (rarely 9) supralabials; anterior maxillary teeth longest; frontal with straight lateral margins	<i>Elaphe dione</i>	

CHECKLIST OF THE AMPHIBIANS AND REPTILES OF AFGHANISTAN

In the following list, species are arranged alphabetically within genera, genera within families, etc., and no systematic relationships are implied by the arrangement.

Class AMPHIBIA
 Order CAUDATA
 Family HYNOBIIDAE
 Genus **Batrachuperus** Boulenger

Batrachuperus BOULENGER, 1878, Bull. Soc. Zool. France, vol. 3, pp. 71-72 (type species: *Salamandrella sinensis* Sauvage, by monotypy).

Batrachuperus mustersi Smith.

Batrachuperus mustersi SMITH, 1940, Ann. Mag. Nat. Hist., ser. 11, vol. 5, pp. 382-383 (type locality: mountain streams of Paghman Range, above Paghman, Afghanistan, 9000-10,000 feet elevation; holotype: British Museum no. 1940.3.1.1).

DISTRIBUTION. Known only from the type locality.

Order SALIENTIA
 Family BUFONIDAE
 Genus **Bufo** Laurenti²

Bufo LAURENTI, 1768, Synops. Rept., p. 25 (type species: *Bufo viridis* Laurenti, 1768, by subsequent designation by Fitzinger, 1843).

Bufo andersonii Boulenger.

Bufo andersonii BOULENGER, 1883, Ann. Mag. Nat. Hist., ser. 5, vol. 12, p. 161 (type locality: Ajmere, Rajputana [restricted by LEVITON, MYERS, and SWAN, 1956, Occ. Pap. Nat. Hist. Mus. Stanford Univ. no. 1, p. 41; 3 syntypes in British Museum]).

DISTRIBUTION. All of northern India at low elevations, from the Ganges Basin through Rajputana, Punjab, and Sind, to southern Afghanistan, north to Kashmir and Nepal; southern and eastern Arabia. In Afghanistan it is known from south of the Hindu Kush in the southeastern part of the country and along the Helmand River, west to the Seistan Basin. To 4500 feet elevation at Kandahar and Khost.

Bufo viridis Laurenti.

Bufo viridis LAURENTI, 1768, Synops. Rept., p. 27, pl. 1, fig. 1 (type locality: Vienna, Austria).

DISTRIBUTION. From southern Sweden and eastern France over all of Europe (except Iberian Peninsula) eastward to Mongolia, south in Central Asia to

² Clarification of the type species of the nominal genus *Bufo*:

Bufo vulgaris Laurenti is cited as type species of the nominal genus *Bufo* by Stejneger (1907) and subsequent authors. This is in error. *Bufo vulgaris* was described by Laurenti. There is no indication that it is proposed as a substitute name for *Rana bufo* Linnaeus to avoid tautonomy, though this is not unlikely. Nevertheless it is subjective, there being no objective basis for this assumption. Also, inasmuch as *B. vulgaris* is not accompanied by a synonymy in which the Linnaean name is cited, nor are the figure references cited by Laurenti the same as those cited by Linnaeus, it is not possible to claim that *B. vulgaris* is a junior objective synonym of *R. bufo* Linnaeus, there being no indication that the two are based on the same type. Therefore, *Bufo vulgaris* Laurenti is type species of the genus *Bufo* only by reason of the fact that Stejneger so designated it in 1907. However, Stejneger was preceded by Fitzinger who, in 1843, designated the type species of Laurenti's genus as *Bufo viridis* Laurenti. To the best of our knowledge this constitutes the first acceptable designation of the type species of this nominal genus.

Tibet and the Himalayas, throughout Southwest Asia, parts of Arabia, and the northern Sahara as far west as Morocco. Throughout almost the whole of the Euro-Siberian, Irano-Turanian and Mediterranean regions. To 15,000 feet in the Himalayas.

Family RANIDAE
Genus **Rana** Linnaeus

Rana LINNAEUS, 1758, Syst. Nat., ed. 10, vol. 1, p. 210 (type species: *Rana temporaria* Linnaeus, 1758, by subsequent designation by Fitzinger, 1843).

Rana cyanophlyctis Schneider.

Rana cyanophlyctis SCHNEIDER, 1799, Hist. amph., vol. 1, p. 137 (type locality: eastern India).

DISTRIBUTION. From Thailand to Nepal and Ceylon, north to Kashmir and the Himalayas, and west through southern Afghanistan and Baluchistan to eastern Iran. It is also recorded from southern Arabia. In Afghanistan it occurs south of the Hindu Kush to elevations of about 4500 feet. It has been taken west of Dilaram and is known from the Iranian portion of the Seistan Basin.

Rana ridibunda ridibunda Pallas.

Rana ridibunda PALLAS, 1771, Reise versch. Prov. russ. Reich, vol. 1, p. 458 [not seen] (type locality: Gurjew [Gurev], USSR, north coast of Caspian Sea [restricted by MERTENS and MÜLLER, 1928, Abh. Senckenberg. Naturf. Ges., vol. 41, p. 20]).

Rana ridibunda ridibunda MERTENS, 1925, Abh. Senckenberg. Naturf. Ges., no. 39, p. 55.

DISTRIBUTION. The whole of Europe to 60° N. except northwest and central Italy; western Asia as far east as northern West Pakistan, Afghanistan, and eastern Turkestan; North Africa and Arabia as far south as the Hejaz. In Afghanistan it is known from the region north of the Hindu Kush, penetrating at least as far south and east as Paghman. It has been recorded from Iranian Seistan, however.

Rana sternosignata Murray.

Rana sternosignata MURRAY, 1885, Ann. Mag. Nat. Hist., ser. 5, vol. 16, pp. 120-121 (type locality: Quetta, West Pakistan).

DISTRIBUTION. The Quetta Plateau in Baluchistan, north at least to Kabul in Afghanistan, and Kashmir. Known localities in Afghanistan lie between 4500 and 8000 feet elevation.

Class REPTILIA
Order CHELONIA
Family TESTUDINIDAE
Genus **Testudo** Linnaeus

Testudo LINNAEUS, 1758, Syst. Nat., ed. 10, vol. 1, p. 197 (type species: *Testudo graeca* Linnaeus, 1758, by subsequent designation by Fitzinger, 1843, Syst. Tept., p. 29).

Testudo horsfieldii Gray.

Testudo horsfieldii GRAY, 1844, Cat. tort. croc. amphib. British Mus., p. 7 (type locality: Afghanistan; holotype in British Museum).

DISTRIBUTION. From the northeast shores of the Caspian Sea eastward across Kazakhstan to Lake Zaysan and thence southwestward to Afghanistan, Waziristan, Baluchistan, and eastern Iran. To at least 8000 feet elevation in Afghanistan.

Order SQUAMATA
Suborder SAURIA
Family AGAMIDAE
Genus **Agama** Daudin

Agama DAUDIN, 1802, Hist. nat. Rept., vol. 3, p. 333 (type species: *Lacerta agama* Linnaeus, 1758, by absolute tautonomy).

Agama agilis Olivier.

Agama agilis OLIVIER, 1807, Voy. Emp. Otho., vol. 4, p. 394, and atlas, pl. 29, fig. 2 [not seen] (type locality: neighborhood of Baghdad, Iraq; syntypes: Paris Museum no. 5708 [2]).

DISTRIBUTION. Western Punjab; West Pakistan; Afghanistan; Iran; Asian steppes of the USSR (coasts of the Caspian Sea, east to the Tarbagatai, and north to the steppes of the lower reaches of Irgiz); Iraq. To about 7500 feet elevation in Afghanistan.

Agama agrorensis (Stoliczka).

Stellio agrorensis STOLICZKA, 1872, Proc. Asiatic Soc. Bengal, pp. 128–129 (type locality: Sussel Pass, at the entrance to the Agror Valley, Hazara District, NW. Punjab, West Pakistan; 9 syntypes in British Museum).

Agama agrorensis, BOULENGER, 1885, Cat. liz. British Mus., vol. 1, p. 363.

DISTRIBUTION. Punjab (Agror, or Oghi Valley); Kashmir (Jhelum Valley, Chilas); Chitral (Arandu); Afghanistan (valley of the Kabul River). To at least 6000 feet elevation.

Agama badakhshana Anderson and Leviton.

Agama badakhshana ANDERSON and LEVITON, Proc. California Acad. Sci., ser. 4, vol. 37, pp. 32–35, figs. 6–7 (type locality: Mazar-i-Sharif, Afghanistan; holotype: Field Museum of Natural History no. 161108).

DISTRIBUTION. Known from three localities, all in Afghanistan: Mazar-i-Sharif, and 64 miles east of Faizabad, both on the northern side of the Hindu Kush, and Paghman, on the southern side.

Agama caucasica (Eichwald).

Stellio caucasicus EICHWALD, 1831, Zool. spec. Ross. Polon., vol. 3, p. 187 (type locality: Tiflis and Baku, Caucasus, USSR).

Agama caucasica, BOULENGER, 1885, Cat. liz. British Mus., vol. 1, p. 367.

DISTRIBUTION. Southeastern Caucasus and northeastern Turkey, east through the northern and mountainous regions of Iran, Transcaspiian provinces of the USSR to Chubek, Tajikistan in the east, Afghanistan, and Waziristan and Baluchistan, West Pakistan. To 9000 feet in Afghanistan.

Agama erythrogastra (Nikolsky).

Stellio erythrogaster NIKOLSKY, 1896, Ann. Mus. Zool. Acad. Imp. Sci. St. Pétersbourg, vol. 1, pp. 370-371 (type locality: Kalender Abad and Ferimun eastern Iran; syntypes: Zoological Institute Leningrad nos. 8759, 8760).

Agama erythrogastra, NIKOLSKY, 1915, Faun. Russie, vol. 1, pp. 119-121.

DISTRIBUTION. Northeastern Iran, in the vicinity of Mashhad, southeastern Turkmen, northern Afghanistan, south through the mountain passes to Paghman; 3000-8000 feet elevation.

Agama himalayana himalayana (Steindachner).

Stellio himalayanus STEINDACHNER, 1867, Reise österr. Fregatte Novara., Zool. Teil., Rept., vol. 1, p. 22, pl. 1, fig. 8 (type locality: Leh and Kargil, Ladakh frontier district, Kashmir; syntypes in Vienna Museum).

Agama himalayana, BOULENGER, 1885, Cat. liz. British Mus., vol. 1, p. 362.

DISTRIBUTION. Himalayas, Trans-Himalayas, southern Tibet, Hindu Kush, the ridge system of Pamiro-Alai west up to the Pamir inclusive, and southern part of Tien Shan; not known north of the Fergana Valley; Chitral, Kashmir, and Ladakh; known from Afghanistan only in the northeast.

Agama lehmanni (Nikolsky).

Stellio lehmanni NIKOLSKY, 1896, Ann. Mus. Zool. Acad. Imp. Sci., St. Pétersbourg, vol. 1, p. xiv (type locality: Fergana and Bokhara, USSR; syntypes in Zoological Institute, Academy of Sciences, Leningrad).

Agama lehmanni, BEDRIAGA, 1907, Wissenschaft. Result. N. M. Przewalski Central Asien Reisen, vol. 3, Amphib. u. Rept., p. 126, pl. 2, fig. 2.

DISTRIBUTION. The mountains of the southeastern part of Central Asia north to the Fergana Valley, west to the Nura Tau and Kugitang ridges, east to the Darvaz Ridge, south to northern Afghanistan (Terentjev and Chernov, 1949, p. 148). Mazar-i-Sharif, at about 1500 feet elevation, appears to be the only documented record for Afghanistan. In the USSR it is found up to 11,000 feet elevation.

Agama nupta De Filippi.

Agama nupta DE FILIPPI, 1843, Giorn. Inst. Lomb. e Bib. Ital., vol. 6, p. 407 (type locality: Persepolis, Iran; holotype in Milan) [not seen].

DISTRIBUTION. West Pakistan; Afghanistan; Iran; Iraq. It appears to be confined for the most part to the southern margins of the Iranian Plateau, ranging from 1000-8000 feet elevation in Iran. In Afghanistan it is known only from the areas south of the Hindu Kush, up to 5000 feet elevation.

Agama nuristanica Anderson and Leviton.

Agama nuristanica ANDERSON and LEVITON, Proc. California Acad. Sci., ser. 4, vol. 37, pp. 39–42, fig. 8 (type locality: Kamdesh, Nuristan, Afghanistan; holotype: Field Museum of Natural History, no. 161136).

DISTRIBUTION. Known only from the type locality in Nuristan, eastern Afghanistan, on the southern side of the Hindu Kush at 1342 meters elevation. Smith's (1935, pp. 214–216) record of *A. tuberculata* for Kabul may refer to this species.

Agama ruderala Olivier.

Agama ruderala OLIVIER, 1807, Voy. Emp. Otho., vol. 2, p. 429, pl. 29, fig. 3 (syntypes from Persia and northern Arabia; syntype: Paris Museum no. 2610) [not seen].
Trapelus megalonyx GÜNTHER, 1864, Rept. British India, p. 159, pl. 14, fig. C (type locality: probably Afghanistan; holotype: ♀ in British Museum).

DISTRIBUTION. North Arabian Desert (Syria, Jordan, Turkey, Iraq, but probably not Saudi Arabia), Iran, southern Afghanistan, and northwestern West Pakistan. Northward it reaches the southern shore of the Caspian Sea and the southeastern Transcaucasian region of the USSR; to about 7500 feet elevation in Afghanistan.

Elsewhere (Clark, Clark, Anderson, and Leviton, 1969, pp. 292–294) we have commented upon the problems surrounding the proper allocation of the Afghan specimens. For the present, both *A. megalonyx* and *A. r. baluchiana* are considered synonyms of *A. ruderala*.

Agama tuberculata Gray.

Agama tuberculata GRAY, 1827, Zool. Jour., vol. 3, p. 218 (type locality: "Bengal"; holotype in British Museum).

DISTRIBUTION. The western Himalayas from Chitral and Kashmir through the Alpine Punjab to Katmandu District in Nepal. Smith's (1935, pp. 214–216) record for Kabul is the only documented Afghan occurrence, and this record may refer to *A. nuristanica* Anderson and Leviton.

Genus **Calotes** Cuvier

Calotes CUVIER, 1817, Règne Anim., vol. 2, p. 35 (type species: *Lacerta calotes* Linnaeus, 1758, by absolute tautonomy).

Calotes versicolor (Daudin).

Agama versicolor DAUDIN, 1802, Hist. nat. Rept., vol. 3, p. 395, pl. 44 (type locality: Pondichery, India [restricted by SMITH, 1935, Fauna British India, vol. 2, p. 192]; holotype in Paris Museum).
Calotes versicolor, GRAY, 1845, Cat. spec. liz. British Mus., p. 243.

DISTRIBUTION. The entire Indian and Indo-Chinese subregions; southeastern Afghanistan; extreme eastern Iran; Pakistan; the entire Indian Peninsula;

Nepal; Ceylon; Andaman Islands; Pulo Condore; Hainan; Hong Kong; southern China; the northern part of the Malay Peninsula; Sumatra; in West Pakistan it ranges north to Swat; locally distributed in Baluchistan. Only two documented localities for Afghanistan, both in the eastern part of the country, south of the Hindu Kush, the highest at 7400 feet elevation.

Genus *Phrynocephalus* Kaup

Phrynocephalus KAUP, 1825, Isis von Oken, vol. 1, p. 591 (type species: *Lacerta guttata* Gmelin, 1789, by subsequent designation by FITZINGER, 1843, Syst. Rept., pp. 18 and 88) [ICZN, 1964: 69a, iv].

Phrynocephalus clarkorum Anderson and Leviton.

Phrynocephalus ornatus BOULENGER (in part), 1887, Cat. liz. British Mus., vol. 3, pp. 496-497.
Phrynocephalus clarkorum ANDERSON and LEVITON, 1967, Proc. California Acad. Sci., ser. 4, vol. 35, pp. 228-231, fig. 1 (type locality: southeast of Kandahar, Afghanistan, 31°20' N., 65°50' E.; holotype: California Academy of Sciences no. 97989).

DISTRIBUTION. The Helmand River basin of Afghanistan and West Pakistan.

Phrynocephalus euptilopus Alcock and Finn.

Phrynocephalus euptilopus ALCOCK and FINN, 1896, Jour. Asiatic Soc. Bengal, vol. 65, pt. 2, p. 556, pl. 12 (type locality: West Pakistan near Darband [elev. 3000 feet], Baluchistan; syntypes in Indian Museum, Calcutta; British Museum; Museum of Comparative Zoology, Harvard [MCZ 7227 ♀]).

DISTRIBUTION. Known from the six syntypes which were collected near Darband, West Pakistan, 3000 feet elevation, a small hollow in the Baluchistan desert basin region at the Afghan frontier, and from recently collected specimens from southeast of Darweshan, in the Helmand basin, Afghanistan (California Academy of Sciences nos. 120205-120207).

Phrynocephalus interscapularis Lichtenstein.

Phrynocephalus interscapularis LICHTENSTEIN, 1856, Nomen. Rept. Amphib. Mus. Zool. Berol., p. 12 (type locality: Bokhara, USSR).

DISTRIBUTION. Central Asian republics of USSR, north to the southeastern Ust Urt, Aral Sea, and Aral Kara Kums, east to the valley of the Syr Darya River, the Kara-tau Ridge, spurs of the Tien Shan and Pamiro-Alai; along the valley of the Pyandzh River it penetrates east to the Vakhsh Valley. It is known in lowland northern Afghanistan from the area between Andkhui and Mazar-i-Sharif, below 2000 feet elevation.

Phrynocephalus luteoguttatus Boulenger.

Phrynocephalus luteoguttatus BOULENGER, 1887, Cat. liz. British Mus., vol. 3, p. 497 (type locality: between Nushki and Helmand, along Afghan-Baluch border; Helmand, Afghanistan; syntypes in British Museum).

DISTRIBUTION. Afghanistan in the Helmand River basin, West Pakistan in the desert basins of the Nushki and Chagai districts and western Las Bela. It

probably enters Seistan in Iran, but no reliable Iranian records exist; to about 4000 feet elevation.

***Phrynocephalus maculatus* Anderson.**

Phrynocephalus maculatus JOHN ANDERSON, 1872, Proc. Zool. Soc., London, p. 389 (type locality: Awada, Iran [corrected to Abadeh, north of Shiraz, by BLANFORD, 1876, Zool. E. Persia, vol. 2, p. 331]).

DISTRIBUTION. The Afghan-Baluchistan border region, east as far as Nushki; the Central Plateau of Iran; northern and gulf coastal Arabia, and Iraq. The extent of its penetration into Afghanistan is not known, though it does reach Darweshan in the Helmand basin; it occurs in Iranian Seistan, on the Central Plateau in Iran, and may be expected throughout the low southern and western regions of Afghanistan.

***Phrynocephalus mystaceus* (Pallas).**

Lacerta mystacea PALLAS, 1776, Reise versch. Prov. russ. Reich., vol. 3, p. 702, pl. 5, fig. 1 (type locality: Naryn steppe on north coast of Caspian Sea, USSR [restricted by MERTENS and MÜLLER, 1928, Abh. Senckenberg. naturf. Ges., vol. 41, p. 261]).

Phrynocephalus mystaceus, BOULENGER, 1885, Cat. liz. British Mus., vol. 1, pp. 379-380.

DISTRIBUTION. Found in Central Asian USSR, southern Kazakhstan; Astrakhan District, eastern Ciscaucasia, northeastern and eastern Iran, and adjacent regions of Afghanistan; in Ciscaucasia south to the vicinity of Makhach-kala; the western limit of distribution passes between the Volga and the Don, the northern limit reaches 48-50° N in some places (Irgiz, Turgai), and in eastern Kazakhstan to the Balkhash and Ala-kul lakes. To the east the distribution is limited by the foothills of Tien Shan and Pamiro-Alai; it somewhat surpasses the Termez along the valley of the Amu Darya (Terentjev and Chernov, 1949, p. 159). In Afghanistan it occurs north of the central massif; it may extend south of the Hari Rud along the western border inasmuch as it has been recorded from northeastern Iran (Zirkuch region) near the Afghan border.

***Phrynocephalus ornatus* Boulenger.**

Phrynocephalus ornatus BOULENGER (in part), 1887, Cat. liz. British Mus., pp. 496-497 (type locality: between Nushki and Helmand, Afghan-Baluch border; lectotype: British Museum no. 1946.8.28.20 [ANDERSON and LEVITON, 1967, Proc. California Acad. Sci., ser. 4, vol. 35, pp. 231-233]).

DISTRIBUTION. The Helmand River basin of Afghanistan and the desert basins of Baluchistan, West Pakistan. Also recorded from the Zirkuch region of eastern Iran (Nikolsky, 1897, p. 324). Whether these latter specimens belong to *Phrynocephalus ornatus* or to *P. clarkorum*, or both, has not been determined.

Phrynocephalus reticulatus boettgeri Bedriaga.

Phrynocephalus raddei var. *boettgeri* BEDRIAGA, 1907, Wissenschaft Result. N. M. Prewalski Central Asien Reisen, vol. 3, p. 217 (type locality: Shirabad, Uzbekistan, USSR; holotype: Zoological Institute Leningrad no. 6117).

Phrynocephalus reticulatus boettgeri, TERENTJEV and CHERNOV, 1949, Diag. Rept. Amph., p. 154.

DISTRIBUTION. Southwestern Tajikistan and adjacent regions of Uzbekistan; northern lowland Afghanistan.

Phrynocephalus scutellatus (Olivier).

Agama scutellata OLIVIER, 1807, Voy. Emp. Otho. (ed. 4), vol. 3, p. 110, Atlas, pl. 42, fig. 1 [not seen] (type locality: Mt. Sophia, near Isfahan, Iran; holotype: Paris Museum no. 6947).

Phrynocephalus tickelii GRAY, 1845, Cat. liz. British Mus., p. 260 (type locality: Afghanistan; holotype in British Museum).

Phrynocephalus scutellatus, SMITH, 1935, Fauna British India, vol. 2, Sauria, p. 229.

DISTRIBUTION. The Central Plateau of Iran, southern Iran, southern Afghanistan, and northern Baluchistan, West Pakistan; to at least 7200 feet elevation in Afghanistan.

Genus **Uromastix** Merrem

Uromastix MERREM, 1820, Tent. Syst. Amph., p. 56 (type species: *Stellio spinipes* Daudin, 1802, by subsequent designation by FITZINGER, 1843, Syst. Rept., p. 18).

Uromastix asmussi (Strauch).

Centrotrachelus asmussi STRAUCH, 1863, Bull. Acad. Imp. Sci. St. Pétersbourg, vol. 6, col. 479 (type locality: Sar-i-Tschah, Iran; holotype in Zoological Institute Leningrad).

Uromastix asmussi, BOULENGER, 1885, Cat. liz. British Mus., vol. 1, p. 409.

DISTRIBUTION. The eastern portion of the Central Plateau of Iran, and the adjacent areas of West Pakistan and Afghanistan; 1800–4000 feet elevation in Iran. The extent of its occurrence in Afghanistan is unknown, as there exists a single record for that country, on the Afghan-Baluch border.

Uromastix hardwickii Gray.

Uromastix hardwickii GRAY, 1827, Zool. Jour., vol. 3, p. 219 (type locality: Kanauj district, United Provinces, India; type in British Museum).

DISTRIBUTION. India, from the United Provinces to Kathiawar and west to the Northwest Frontier Provinces and southeastern Baluchistan east of the Iranian Plateau and below 2000 feet elevation. Afghanistan along the Kabul River Valley.

Family ANGUIDAE

Genus **Ophisaurus** Daudin

Ophisaurus DAUDIN, 1803, Bull. Soc. Phil., vol. 3, p. 188 (type species: *Anguis ventralis* Linnaeus, 1758, by monotypy).

Ophisaurus apodus (Pallas).

Lacerta apoda PALLAS, 1775, Nov. Comment. Acad. Sci. Petropol., vol. 19, p. 435, pls. 9–10 [not seen] (type locality: Naryn steppe on the north coast of the Caspian Sea, USSR).
Ophisaurus apodus, MERTENS and MÜLLER, 1928, Abh. Senckenberg. naturf. Ges., vol. 41, p. 26.

DISTRIBUTION. Balkan Peninsula (to Istria and southern Dobrudsha in the north); Crimean Peninsula; Turkey; Rhodes; Syria; northern and western Iran; Caucasus, Transcaspian, and Turkestan regions of USSR, and northern Afghanistan north of the Hindu Kush; to at least 8700 feet in Afghanistan.

Family GEKKONIDAE

Genus **Agamura** Blanford

Agamura BLANFORD, 1874, Ann. Mag. Nat. Hist., ser. 4, vol. 13, p. 455 (type species: *Gymnodactylus persicus* Duméril, 1856, by subsequent designation by SMITH, 1935, Fauna British India, vol. 2, p. 61).

Agamura femoralis: See Addendum, pg. 205.

Agamura persica (Duméril).

Gymnodactylus persicus DUMÉRIL, 1856, Arch. Mus. Hist. Nat. Paris, vol. 8, p. 481 (type locality: Iran; syntypes: Paris Museum no. 6761 [3]).

Agamura persica, BLANFORD, 1874, Ann. Mag. Nat. Hist., ser. 4, vol. 13, p. 455.

DISTRIBUTION. Iran, on the Central Plateau; West Pakistan, east to Cape Monze near Karachi and inland to Waziristan; Afghanistan in the areas south of the Hindu Kush and the low country west of the mountains, along the Iranian border; to 8500 feet elevation at Paghman.

Alsophylax pipiens: See Addendum, pg. 205.

Genus **Bunopus** Blanford

Bunopus BLANFORD, 1874, Ann. Mag. Nat. Hist., ser. 4, vol. 13, p. 454 (type species: *Bunopus tuberculatus* Blanford, 1874, by monotypy).

Bunopus tuberculatus Blanford.

Bunopus tuberculatus BLANFORD, 1874, Ann. Mag. Nat. Hist., ser. 4, vol. 13, p. 454 (syntypes from Iran: Bahu Kalat; Pishin; Isfandak; near Bampur; Rigan; Narmashir: Tunb Island; West Pakistan: Baluchistan: Mand; Saman; Dasht; syntypes: British Museum; Indian Museum, Calcutta; Museum of Comparative Zoology, Harvard no. 7128).

DISTRIBUTION. Iraq; Iran; Afghanistan; West Pakistan. All Afghan records are for Seistan, the Helmand Basin, and the higher regions to the east (7000 feet elevation at Ghaomi Faringi).

Genus **Crossobamon** Boettger

Crossobamon BOETTGER, 1888, Zool. Jahrb. III, Syst., p. 880 (type species: *Gymnodactylus eversmanni* Wiegmann, 1834, by monotypy).

Crossobamon eversmanni (Wiegmann).

Gymnodactylus eversmanni WIEGMANN, 1834, Herpet. Mexicana, p. 19, note 28 (type locality: "Asia media").

Crossobamon eversmanni, BOETTGER, 1888, Zool. Jahrb. III, Syst., p. 880.

DISTRIBUTION. Central Asian republics of the USSR, northeastern and eastern Iran and neighboring regions of Afghanistan. In the north it ranges to the northern Chink (Precipice), Ust Urt, Irgiz River, Aral Kara Kum, and sands of Muyun Kum, east to the mountain system of Tien Shan and Pamiro-Alai (Terentjev and Chernov, 1949, p. 129).

***Crossobamon lumsdeni* (Boulenger).**

Stenodactylus lumsdeni BOULENGER, 1887, Cat. Iiz. British Mus., vol. 3, p. 479 (type locality: Afghan-Baluch border between Nushki and Helmand; holotype in British Museum).
Crossobamon lumsdeni, KLUGE, 1967, Bull. American Mus. Nat. Hist., vol. 135, p. 23.

DISTRIBUTION. Known from the holotype, which was taken somewhere between Nushki, West Pakistan, and the Helmand River, Afghanistan. Nikolsky (1899, p. 388) records it from Gurmuck, eastern Kerman, Iran.

***Crossobamon maynardi* (Smith).**

Stenodactylus orientalis, ALCOCK and FINN, 1896 (*nec* BLANFORD, 1876), Jour. Asiatic Soc. Bengal, vol. 65, p. 554.
Stenodactylus maynardi SMITH, 1933, Rec. Indian Mus., vol. 35, p. 18 (type locality: Baluchistan, near Afghan border; based on ALCOCK and FINN's specimens; syntypes: British Museum no. 1931.6.14.1 ♀, and Indian Museum, Calcutta, no. 13944 ♂).
Crossobamon maynardi, KLUGE, 1967, Bull. American Mus. Nat. Hist., vol. 135, p. 23.

DISTRIBUTION. The types were collected somewhere along the route followed by Maynard and McMahon during the travels of the Afghan-Baluch Boundary Commission of 1896. No definite locality was recorded. Minton (1966, p. 165) records specimens from the vicinity of Nushki, Chagai District, Baluchistan, West Pakistan. It is known from the Helmand Basin in Afghanistan.

Genus *Cyrtodactylus* Gray

Cyrtodactylus GRAY, 1827, Phil. Mag., ser. 2, vol. 2, p. 55 (type species: *Cyrtodactylus pulchellus* Gray, 1827, by monotypy).

***Cyrtodactylus caspius* (Eichwald).**

Gymnodactylus caspius EICHWALD, 1831, Zool. Spec., vol. 3, p. 181 (type locality: Baku, on the Caspian Sea, USSR; syntypes: Zoological Institute Leningrad nos. 3181-3182 [?]).
Cyrtodactylus caspius, UNDERWOOD, 1954, Proc. Zool. Soc. London, vol. 124, p. 475.

DISTRIBUTION. Eastern Azerbaidzhan SSR, northern and eastern Iran, northern Afghanistan, and Central Asian republics of the USSR, north to a line connecting the southeastern coast of the Kosomolets Gulf with the northern coast of the Aral Sea, and east to the mountains in the Kysyl Kums, the Nura Tau Ridge, and foothills of the Pamiro-Alai; along the valley of the Pyandzh River it reaches east to the surroundings of Chubek (Terentjev and Chernov, 1949, p. 137). In Afghanistan it occurs north of the Hindu Kush.

Cyrtodactylus fedtschenkoii (Strauch).

Gymnodactylus fedtschenkoii STRAUCH, 1887, Mém. Acad. Imp. Sci. St. Pétersbourg, ser. 7, vol. 35, pp. 46–47 (syntypes from USSR: Samarkand; Bokhara; Gissar; syntypes: Zoological Institute Leningrad nos. 3387[2], 5039[2], 6354, 5355[4], 6479, 7401[2]).

Cyrtodactylus fedtschenkoii, UNDERWOOD, 1954, Proc. Zool. Soc. London, vol. 124, p. 475.

DISTRIBUTION. Western Turkmen, Uzbekistan, Tajikistan, Afghanistan, eastern Iran, and western Baluchistan. In the USSR the westernmost localities are the valley of the Tedzhen River, surroundings of Mara, coast of the Aral Sea; the northeastern border of the range does not reach beyond the valley of the Syr Darya River. In Afghanistan it is known from north of the Hindu Kush and has been found at Paghman. It has been suggested that *Gymnodactylus longipes* Nikolsky of eastern Iran is a synonym (Clark, Clark, Anderson, and Leviton, 1969, p. 301).

***Cyrtodactylus russowii** (Strauch).

Gymnodactylus russowii STRAUCH, 1887, Mém. Acad. Imp. Sci. St. Pétersbourg, ser. 7, vol. 35, pp. 49–51, figs. 10–12 (syntypes from USSR: Novo-Alexandrovsk; Chodschent; Mangyschlak; Murza Robat; Mohol-tau; Tschimkent; Tschinaz; Golodnaja desert; Utsch-Kurgan at Naryn; Clark-Ukjur; syntypes: Zoological Institute Leningrad nos. 3658[2], 3659, 3660, 3700[3], 3701[2], 4192, 4193[6], 4194, 4195[5], 4310[2], 5037, 5197, 5218, 5224, 5800[2], California Academy of Sciences nos. 94050–94052).

Cyrtodactylus russowii, UNDERWOOD, 1954, Proc. Zool. Soc. London, vol. 124, p. 475.

DISTRIBUTION. Eastern Caucasus foreland (Starogladkowskaja) and from the east coast of the Caspian Sea to central Asia, including northern Iran and northern Afghanistan, according to Wermuth (1965, p. 66). We know of no documented records for either Iran or Afghanistan.

Cyrtodactylus scaber (Heyden).

Stenodactylus scaber HEYDEN, 1827, in RÜPPELL, Atlas Reise nördl. Afrika, Rept., p. 15, pl. 4, fig. 2 (type locality: Tor, Sinai Peninsula [see Anderson, J., 1898, Zool. Egypt, p. 55, for comment on probable source of Heyden's specimens]; lectotype: Senckenberg Museum Frankfurt no. 8180 ♂).

Cyrtodactylus scaber, UNDERWOOD, 1954, Proc. Zool. Soc. London, vol. 124, p. 475.

DISTRIBUTION. From Egypt south to Ethiopia, and east across Arabia and the arid regions of Southwest Asia to Afghanistan, West Pakistan, and northwestern India. In Afghanistan it is known from the low elevations of the south and southeast, up to about 5000 feet elevation. Our previous (Clark, Clark, Anderson, and Leviton, 1969, p. 302) identification of a small juvenile gecko from northwestern Afghanistan is in error. This specimen has been reidentified as *C. caspius*.

Cyrtodactylus watsoni (Murray).

Gymnodactylus watsoni MURRAY, 1892, Zool. Beloochistan and S. Afghanistan, pp. 68–69 (type locality: Quetta, West Pakistan).

Cyrtodactylus watsoni, MINTON, 1966, Bull. American Mus. Nat. Hist., vol. 134, p. 79.

DISTRIBUTION. Northern Las Bela to Quetta, and northeastward to Swat and the northern Punjab in West Pakistan; westward up to the Kabul River Valley at least as far as Jalalabad in Afghanistan.

Cyrtodactylus species.

Cyrtodactylus fedtschenkoii, CLARK, CLARK, ANDERSON, and LEVITON, 1969, Proc. California Acad. Sci., ser. 4, vol. 36, pp. 300-302 [but not including fig. 2]. ANDERSON and LEVITON, 1969, Proc. California Acad. Sci., ser. 4, vol. 37, p. 45.

DISTRIBUTION. A *Cyrtodactylus* closely allied to *C. fedtschenkoii* occurs in the Helmand Basin from Farah in the west to near Kandahar in the east. This appears to be an undescribed species, and questions regarding the systematics of these and related geckos are under study.

Genus **Eublepharis** Gray

Eublepharis GRAY, 1827, Phil. Mag., ser. 2, vol. 2, p. 56 (type species: *Eublepharis hardwickii* Gray, 1827, by monotypy).

Eublepharis macularius (Blyth).

Cyrtodactylus macularius BLYTH, 1854, Jour. Asiatic Soc. Bengal, vol. 23, pp. 737-738 (type locality: Salt Range, Punjab; holotype in Indian Museum, Calcutta).

Eublepharis macularius, JOHN ANDERSON, 1871, Proc. Zool. Soc. London, p. 163.

DISTRIBUTION. Southern Transcaспia, eastern Afghanistan south of the Hindu Kush, West Pakistan in Baluchistan, the Northwest Frontier Provinces, and south to Rajputana and the Khandesh District of India; to at least 5300 feet elevation in Afghanistan, 8000 feet in Baluchistan. As yet, specimens are unknown from the large area between southern Turkmen and eastern Afghanistan.

Genus **Hemidactylus** Oken

Hemidactylus OKEN, 1817, Isis von Oken, col. 1183 (based on Cuvier's Hemidactyle, 1817, Règne Anim., vol. 2, p. 47; type species: *Gecko tuberculatus* Daudin).

Hemidactylus flaviviridis Rüppell.

Hemidactylus flaviviridis RÜPPELL, 1835, Neue Wirbelth. Faun. Abyss., Amph., p. 18, pl. 6, fig. 2 (type locality: Nassaua Island, Eritrea; lectotype: Senckenberg Museum Frankfurt no. 8772 ♂).

DISTRIBUTION. Northern India west of Bengal and south to Bombay, through southern (coastal) Iran and Arabia to the African shores of the Red Sea. In Afghanistan it is known only from Paghman and Jalalabad. Much of its distribution, from the shores of the Red Sea and around the shores of the Arabian Peninsula and Iran, is due to its having been carried about by man, and its presence in Afghanistan may also be due to human agency.

Genus **Teratoscincus** Strauch

Teratoscincus STRAUCH, 1863, Bull. Acad. Imp. Sci. St. Pétersbourg, vol. 6, col. 480 (type species: *Teratoscincus keyserlingi* Strauch, 1863, by monotypy).

Teratoscincus bedriagai Nikolsky.

Teratoscincus bedriagai NIKOLSKY, 1899, Ann. Mus. Zool. Acad. Imp. Sci., St. Pétersbourg, vol. 4, pp. 146-147 (types from Seistan and Zirkuch, eastern Iran; syntypes: Zoological Institute Leningrad nos. 9157, 9158[2], 9159[3], 9160, 9161, 9162, 9163).

DISTRIBUTION. Eastern Iran and the Helmand River basin of Afghanistan; to at least 4700 feet elevation.

Teratoscincus microlepis Nikolsky.

Ceramadactylus affinis, ALCOCK and FINN, 1896 (*nee* MURRAY, 1884), Jour. Asiatic Soc. Bengal, vol. 65, p. 554.

Teratoscincus microlepis NIKOLSKY, 1899, Ann. Mus. Zool. Acad. Imp. Sci., St. Pétersbourg, vol. 4, pp. 145-146 (type locality: Duz-Ab; holotype: Zoological Institute Leningrad no. 9164).

DISTRIBUTION. Extreme eastern Iran and adjacent Baluchistan and Afghanistan along the Afghan-Baluchistan border.

Teratoscincus scincus (Schlegel).

Stenodactylus scincus SCHLEGEL, 1858, Handl. Dierk., vol. 2, p. 16 (type locality: Ili River, Turkestan, USSR; holotype in Leiden Museum).

Teratoscincus scincus, BOULENGER, 1885, Cat. Iiz. British Mus., vol. 1, pp. 12-13, pl. 2, fig. 3.

DISTRIBUTION. Central Asia, in the north up to the Chink (Precipice) Ust Urt, Aral Kara Kum, and valleys of the rivers Chu and Ili, east to the foothills of the Tien Shan and Pamiro-Alai; one record for Sachow in the southern Gobi; the vicinity of Kokand in the Syr Darya Valley and Vakhsh Valley inclusive in the valleys of the river Pyandzh; northeastern and eastern Iran (Terentjev and Chernov, 1949, p. 128). To the west it reaches the eastern shore of the Caspian Sea. Its western limit in Iran is the steppe between Argavani and Marinjab, Tehran Province. In Baluchistan it is not known east of Nushki, nor south of Kharan (Minton, 1966, p. 76). It is known in Afghanistan from the low deserts along the western and southern borders; to 6000 feet elevation in Iran, at least 4700 feet in Afghanistan.

Family LACERTIDAE

Genus **Acanthodactylus** Fitzinger

Acanthodactylus FITZINGER, 1834, in WIEGMANN, Herpet. Mexicana, p. 10 (type species: *Lacerta boskiana* Lichtenstein, 1823, by monotypy).

Acanthodactylus cantoris Günther.

Acanthodactylus cantoris GÜNTHER, 1864, Rept. British India, p. 73 (type locality: Ramnagar, Agra, India; holotype in British Museum).

DISTRIBUTION. The species as a whole ranges from northwestern India through West Pakistan, southern Afghanistan, and lowland southern Iran and Arabia. In Afghanistan it occurs in the valley of the Kabul River and in the Helmand River basin. The status of these populations is under study.

Genus *Eremias* Fitzinger

Eremias FITZINGER, 1834, in WIEGMANN, Herpet. Mexicana, p. 9 (type species: *Lacerta variabilis* Pallas, 1811, by subsequent designation by FITZINGER, 1843, Syst. Rept., p. 21).

Eremias acutirostris (Boulenger).

Scapteira acutirostris BOULENGER, 1887, Cat. Iiz. British Mus., vol. 3, pp. 114–115 (type locality: between Nushki and Helmand, Afghan-Baluch border region; holotype in British Museum).

Eremias (Scapteira) acutirostris, LANTZ, 1928, Bull. Mus. Georgie, vols. 4 and 5, pp. 41, 136.

DISTRIBUTION. Desert basins of northwestern Baluchistan and adjoining Afghanistan.

Eremias aporosceles (Alcock and Finn).

Scapteira aporosceles ALCOCK and FINN, 1896, Jour. Asiatic Soc. Bengal, vol. 65, p. 559, pl. 13 (type locality: Afghan-Baluch border: "common west of Robat I" [restricted by SMITH, 1935, Fauna British India, vol. 2, p. 388, to Baluchistan: near Nushki; Robat I lies some 120 miles to the west of Nushki, however]; syntypes in British Museum, and Indian Museum, Calcutta).

Eremias (Scapteira) aporosceles, LANTZ, 1928, Bull. Mus. Georgie, vols. 4 and 5, pp. 41, 127–130, 136.

DISTRIBUTION. Baluchistan, West Pakistan, and Afghanistan, along the Afghan-Baluch border.

Eremias aria Anderson and Leviton.

Eremias aria ANDERSON and LEVITON, 1967, Occ. Pap. California Acad. Sci., no. 64, pp. 1–4, fig. 1 (type locality: 5–10 mi. ENE. Nimla on old Kabul-Jalalabad road, 10 mi. SW. Balabagh [34°19'–21' N, 70°10'–15' E]; holotype: California Academy of Sciences no. 96204 ♂).

DISTRIBUTION. Known only from the vale of Jalalabad in eastern Afghanistan.

Eremias fasciata Blanford.

Eremias fasciata BLANFORD, 1874, Ann. Mag. Nat. Hist., ser. 4, vol. 14, p. 32 (type locality: Saidabad, southwest of Kerman, Iran; syntypes in British Museum).

DISTRIBUTION. Eastern Iran, southern Afghanistan in the Helmand River basin, and Baluchistan, West Pakistan.

Eremias grammica (Lichtenstein).

Lacerta grammica LICHTENSTEIN, 1823, in EVERS-MANN, Reise nach Buchara, p. 140 (type locality: Karakum and Kizyl-Kum, USSR).

Eremias (Scapteira) grammica, LANTZ, 1928, Bull. Mus. Georgie, vols. 4 and 5, pp. 41, 117–122, 136.

DISTRIBUTION. Central Asian republics of the USSR, southern Kazakhstan, north to lower reaches of Irghiz and Turgai rivers and Lepsa River, east to Ala Tau mountains, northeastern and eastern Iran, and adjacent lowland regions of Afghanistan, north of the Hindu Kush.

***Eremias guttulata watsonana* Stoliczka.**

Eremias (Mesalina) watsonana STOLICZKA, 1872, Proc. Asiatic Soc. Bengal, pp. 86-87 (type locality: between Karachi and Sakhar, Sind, West Pakistan; syntypes: British Museum, and Indian Museum, Calcutta).

Eremias guttulata watsonana, SMITH, 1935, Fauna British India, vol. 2, pp. 389-390.

DISTRIBUTION. *Eremias guttulata* ranges from North Africa through Arabia and the desert regions of Southwest Asia, north to Turkman and east to Sind in West Pakistan. *E. g. watsonana* occurs throughout Iran and Afghanistan at elevations below 8000 feet. According to Minton (1966, p. 110), it is found throughout the arid parts of West Pakistan but often rather spottily, common in Las Bela and along the edge of the Thar Desert, but rare in the intervening area.

***Eremias intermedia* (Strauch).**

Podarces (Eremias) intermedia STRAUCH, 1876, Voy. Przewalski, Rept., p. 28 (type locality: Kizil Kum, Aralo-Caspian desert, USSR).

Eremias intermedia, BOULENGER, 1887, Cat. Iiz. British Mus., vol. 3, pp. 100-101.

DISTRIBUTION. Soviet Central Asia and southern regions of Kazakhstan; north to Mangyshlak, sands of the Bol'shie Barsuki, Aral Kara Kums, valley of Chu River and Balkhash Lake; east to Tien Shan and Pamiro-Alai; reaching the sands of the Vakhsh lowlands along the valley of the Amu Darya River. It has been taken in the valley of the Tajan River at the point where the borders of Iran, Afghanistan, and Turkmen meet, and undoubtedly occurs within the borders of Iran and Afghanistan, although no records exist to the south of this point.

***Eremias lineolata* (Nikolsky).**

Scapteira lineolata NIKOLSKY, 1896, Ann. Mus. Zool. Acad. Imp. Sci., St. Pétersbourg, vol. 1, p. 371 (type locality: between Faizabad and Nusi, eastern Iran; syntypes: Zoological Institute Leningrad no. 8801[6]; British Museum).

Eremias lineolata, LANTZ, 1928, Bull. Mus. Georgie, vols. 4 and 5, pp. 39, 79-84, 134.

DISTRIBUTION. Turkmen, Uzbekistan, southern Kazakhstan, southwestern Tajikistan, USSR. It occurs in eastern Iran and northern lowland Afghanistan. In the north it ranges up to the Chink (Precipice) Ust Urt, Aral Sea, middle and lower course of the Chu River and lower coast of Balkhash Lake, east to the Tien Shan and Pamiro-Alai mountain system. To the east it reaches the lower extent of the Vakhsh River inclusive along the Amu Darya Valley.

***Eremias nigrocellata* Nikolsky.**

Eremias nigrocellata NIKOLSKY, 1896, Ann. Mus. Zool. Acad. Imp. Sci. St. Pétersbourg, vol. 1, p. 371 (types from between Feizabad and Mondechi, and Seistan, eastern Iran; syntypes: Zoological Institute Leningrad nos. 8798[3], 8779[2], 8800).

DISTRIBUTION. Southwestern Tajikistan, southern Uzbekistan (vicinity of Shirabad) in the USSR; eastern Iran; northern lowland Afghanistan. It occurs between 4000 and 5000 feet elevation in Iran; known Afghan localities are below 2000 feet.

Eremias regeli Bedriaga.

Eremias regeli BEDRIAGA, 1907, Ann. Zool. Mus. Acad. Imp. Sci. St. Pétersbourg, vol. 10 (1905), p. 236 (type locality: Shirabad, Uzbekistan, USSR; syntype: Zoological Institute Leningrad no. 6115).

DISTRIBUTION. Found in the USSR in the valleys of the upper reaches of the Amu Darya River and lower course of the Pyandzh River and their tributaries, and adjacent foothills. In the west it is known up to the vicinity of Kelif, east of Kulyab, north to the Gissar Ridge (Terentjev and Chernov, 1949, p. 199). The only Afghan record is in the valley of the Kabul River, to the south of the Hindu Kush, an unexpected occurrence suggesting serious unsolved systematic and zoogeographic problems.

Eremias scripta (Strauch).

Podarces (Scapteira) scripta STRAUCH, 1867, Mel. Biol. Acad. St. Pétersbourg, vol. 6, p. 424 (type locality: Aralo-Caspian desert, USSR; no specimens listed, nor type designated).
Eremias (Rhabderemias) scripta, LANTZ, 1928, Bull. Mus. Georgie, vols. 4 and 5, pp. 38, 73-79, 133.

DISTRIBUTION. Soviet Central Asia and southern Kazakhstan: in the north to Mangyshlak, southern Ust Urt Precipice, sands of Bol'shie Barsuki, valley of Chu River, coast lines of Lake Balkhash, and valley of the Lepsa River, east to the Tien Shan and Pamiro-Alai mountain ranges; along the Amu Darya Valley it reaches the lowlands of the Vakhsh River. Terentjev and Chernov (1949, p. 204) state that it is found in eastern Iran and adjacent regions of Afghanistan and Baluchistan. We find no records for Iran; in Afghanistan it occurs in the southern desert region, and in Baluchistan it is known from the Chagai District. If this southern population is, indeed, the same species as that inhabiting the USSR, it is to be expected along the Afghan-Iranian border.

Eremias velox persica Blanford.

Eremias persica BLANFORD, 1874, Ann. Mag. Nat. Hist., ser. 4, vol. 14, p. 31 (type locality: near Isfahan, Iran; syntypes in British Museum).
Eremias velox var. *persica*, BOULENGER, 1921, Monogr. Lacert., vol. 2, pp. 312-314.

DISTRIBUTION. The Central Plateau of Iran, southern Turkmen (vicinity of Kushka and Kopet Dagh), southern Afghanistan, and Baluchistan and Waziristan, West Pakistan. To at least 8000 feet in Afghanistan.

Eremias velox velox (Pallas).

Lacerta velox PALLAS, 1771, Reise Russ. Reich, vol. 1, p. 457 (type locality: Inderskija Gory, region of lower Ural River, USSR).
Eremias velox, WIEGMANN, 1834, Herpet. Mexicana, p. 9.
Eremias velox velox, LANTZ, 1918, Proc. Zool. Soc. London, p. 14.

DISTRIBUTION. From the Volga to western Mongolia and into Sinkiang. In the southeast it is limited by the Tien Shan Mountains, and in the southwest by

the Elburz Mountains and the south coastal region of the Caspian Sea. The Kopet Dagh forms its southern limit, except where it may penetrate the north-eastern border of Iran, extending also into northwestern Afghanistan, perhaps south along the Iran-Afghan border to the Seistan Basin. The only published records for Afghanistan are the River Tajan just at the Afghan-Iran-Transcaspian border, and New Gulran in northwestern Afghanistan.

Genus **Ophisops** Ménétries

Ophisops MÉNÉTRIES, 1832, Cat. rais. Obj. Zool. Caucas., p. 63 (type species: *Ophisops elegans* Ménétries, 1832, by monotypy).

Ophisops jerdoni Blyth.

Ophisops jerdoni BLYTH, 1853, Jour. Asiat. Soc. Bengal, vol. 22, p. 653 (type locality: Mhow, Indore, Central India; holotype lost [*vide* SMITH, 1935, Fauna British India, vol. 2, p. 377]).

DISTRIBUTION. From the Kabul River Valley of eastern Afghanistan through the Northwest Frontier Provinces and northern Punjab of West Pakistan south to Rewa State and Bellary in western India.

Family SCINCIDAE

Genus **Ablepharus** Fitzinger

Ablepharus FITZINGER, 1823, in LICHTENSTEIN, Ver. Doub. Zool. Mus. Berlin, p. 103 (type species: *Ablepharus pannonicus* Lichtenstein, 1823, by monotypy).

Ablepharus bivittatus lindbergi Wettstein.

Ablepharus bivittatus lindbergi WETTSTEIN, 1960, Zool. Anz., vol. 165, pp. 61-62 (type locality: steppe a few km. west of Obeh, east of Herat, northwestern Afghanistan; holotype: Vienna Museum no. 15877).

DISTRIBUTION. *Ablepharus bivittatus* ranges from the Caucasus and Talysh mountains in southeastern Transcaucasia, USSR, northern Iran (to 11,000 feet elevation) and the Zagros Mountains of western Iran, through southern Turkmen in the Kopet Dagh, to Afghanistan and the Punjab. *Ablepharus b. lindbergi* is known from upland Afghanistan (to at least 9600 feet elevation), and a single record from the Punjab.

***Ablepharus grayanus** (Stoliczka).

Blepharosteres grayanus STOLICZKA, 1872, Proc. Asiat. Soc. Bengal, pp. 74-75 (type locality: Waggar District, northeastern Kachh, West Pakistan; holotype in Indian Museum, Calcutta).

Ablepharus grayanus, BOULENGER, 1887, Cat. Iiz. British Mus., vol. 3, p. 352.

DISTRIBUTION. In West Pakistan it is known from Kutch, Sind, mostly west of the Indus, eastern Baluchistan, and the Punjab and Northwest Frontier Provinces at low elevations (Minton, 1966, p. 104). It is recorded from the eastern

and southeastern margins of the Central Plateau in Iran, and in the USSR from a single locality, Nimichi-Bol', in southern Tajikistan. There appear to be no documented records for Afghanistan, although Terentjev and Chernov (1949, p. 171) state that it occurs there.

Ablepharus pannonicus Lichtenstein.

Ablepharus pannonicus LICHTENSTEIN, 1823, in EVERSMAHN, Reise nach Buchara, p. 145 (type locality: Buchara, USSR).

DISTRIBUTION. Iraq; northern and western Iran; in the USSR it is found in the Kopet Dagh, mountains of the Pamiro-Alai systems and their foothill lowlands, north to the vicinity of Leninabad, east to Darvaz, inclusive; probably throughout most of Afghanistan to at least 7600 feet elevation; in West Pakistan it occurs in the mountainous northern sections from Quetta to Chitral; northern Punjab.

Genus **Eumeces** Wiegmann

Eumeces WIEGMANN, 1834, Herpet. Mexicana, p. 36 (type species: *Scincus pavementatus* Geoffroy-St. Hillaire, 1827, by subsequent designation by TAYLOR, 1935, Univ. Kansas Sci. Bull., vol. 23, p. 29).

***Eumeces blythianus** (Anderson).

Mabouia blythiana JOHN ANDERSON, 1871, Proc. Asiat. Soc. Bengal, p. 186 (type locality: Amritsar, Punjab).

Eumeces blythianus, BOULENGER, 1887, Cat. liz. British Mus., vol. 3, p. 385.

DISTRIBUTION. Not yet recorded from within the political boundaries of Afghanistan, but known from the Afridi country along the Afghan border near the Khyber Pass. Minton (1966, p. 102) found it south to the coastal plain at Karachi. The type, said to come from Amritsar in the Punjab, was purchased from a merchant.

Eumeces schneideri (Daudin).

Scincus schneideri DAUDIN, 1802, Hist. nat. Rept., vol. 4, p. 291 (no type locality given).

Eumeces schneideri, BOULENGER, 1887, Cat. liz. British Mus., vol. 3, pp. 383-384.

DISTRIBUTION. *Eumeces schneideri* (*sensu lato*), is found across North Africa north of the Sahara; Southwest Asia, from the Mediterranean to West Pakistan, and from the Transcaucasian and Transcaspian provinces of the USSR to northern Saudi Arabia and the Persian Gulf. In Afghanistan it is known from the Helmand Basin and from northern Afghanistan in the low country north of the Hindu Kush.

We have examined none of the specimens from Afghanistan. Terentjev and Chernov (1949, p. 169) state that *Eumeces s. princeps*, the subspecies which occurs in the USSR, is also found in Afghanistan. *Eumeces s. zarudnyi* is the

form from eastern Iran. Both may occur in Afghanistan. Some recent workers regard *E. blythianus* as a subspecies of *E. schneideri*, and a record from the Helmand may refer to this form. We have not seen enough material to express an opinion regarding the relationships of the several nominal forms.

Eumeces taeniolatus (Blyth).

Eurylepis taeniolatus BLYTH, 1854, Jour. Asiat. Soc. Bengal, vol. 23, pp. 739-740 (type locality: Salt Range, Punjab; holotype in Indian Museum, Calcutta).

Eumeces taeniolatus, STOLICZKA, 1872, Proc. Asiat. Soc. Bengal, pp. 75-76.

DISTRIBUTION. Southern Turkmen, USSR; eastern Iran; Afghanistan; West Pakistan; Kashmir; Arabia (two records exist for the Arabian peninsula, that of Taylor (1935), pp. 111-119) citing a specimen in the British Museum from El Kubar, southwestern Arabia, and Haas (1957, pp. 74-75, fig. 9) for a specimen from 23 miles north of Hail, Saudi Arabia, and citing a British Museum specimen from Muscat). While Terentjev and Chernov (1949, p. 170) state that it is found in northern and northeastern Iran, the only record we find is that of the River Tajan on the Afghan-Iran-Turkmen border. In Afghanistan, the only known locality other than the River Tajan is Pandjvai near Kandahar.

Genus **Mabuya** Fitzinger

Mabuya FITZINGER, 1826, Neue Class. Rept., pp. 23 and 52 (type species: *Lacerta mabouya* Lacépède, 1788, by tautonomy).

***Mabuya aurata** (Linnaeus).

Lacerta aurata LINNAEUS, 1758 (in part), Syst. Nat., ed. 10, p. 209 (type locality: Cyprus).

Mabuya aurata, ANDERSSON, 1900, Kungl. Sv. Vet.-Akad. Handl. Stockholm, vol. 26, pt. 4, p. 14.

DISTRIBUTION. Ethiopia; Eritrea; Cyprus; Syria; Turkey; Iraq; northern and western Iran; Muscat; Armenian SSR, Nakhichevan ASSR, southern Turkmen and Uzbekistan, north to Dzhizak and Chinaz. A record for Sind is in considerable doubt (Minton, 1966, p. 99), and it has not been recorded from the eastern part of the Plateau of Iran. The only possible Afghan record is for the River Tajan at the Iran-Afghanistan-Turkmen borders.

Mabuya dissimilis (Hallowell).

Euprepes dissimilis HALLOWELL, 1860, Trans. American Phil. Soc., vol. 11, p. 78 (type locality: Bengal).

Mabuya dissimilis, BOULENGER, 1887, Cat. liz. British Mus., vol. 3, p. 175.

DISTRIBUTION. From West Bengal and Bihar across the plains of northern and central India. In West Pakistan it ranges from the delta of the Indus north to Rawalpindi and Campbellpore, but not westward onto the Plateau of Iran (Minton, 1966, p. 101). In Afghanistan it is known only from the valley of the Kabul River, to 3500 feet elevation.

Genus **Ophiomorus** Duméril and Bibron

Ophiomorus DUMÉRIL and BIBRON, 1839, Erp. Gen., vol. 5, p. 799 (type species: *Ophiomorus miliaris* Duméril and Bibron, 1839, by monotypy).

Leviton's (1959, p. 461) inclusion of *O. brevipes* in the list of species known from Afghanistan was based on the speculation by Terentjev and Chernov (1949, p. 175) that it occurs in Afghanistan.

Ophiomorus tridactylus (Blyth).

Sphenocephalus tridactylus BLYTH, 1855, Jour. Asiatic Soc. Bengal, vol. 22, p. 654 (type locality: Afghanistan; holotype in Indian Museum, Calcutta).

Ophiomorus tridactylus, BOULENGER, 1887 (in part), Cat. Iiz. British Mus., vol. 3, pp. 394-395.

DISTRIBUTION. The sandy areas of the Helmand Basin and adjacent regions of eastern Iran, southern Afghanistan, and northern Baluchistan, West Pakistan.

Genus **Scincella** Mittleman

Scincella MITTLEMAN, 1950, Herpetologica, vol. 6, p. 19 (type species: *Scincus lateralis* Say, 1823, by original designation).

Scincella himalayana (Günther).

Eumeces himalayanus GÜNTHER, 1864, Rept. British India, p. 86 (type locality: Western Himalayas; holotype in British Museum).

Scincella himalayana, MITTLEMAN, 1950, Herpetologica, vol. 6, p. 19.

DISTRIBUTION. Mountainous regions from Nepal west to southern Turkmen; known from Chitral and the Hazara District of West Pakistan; Kashmir; Nuristan in eastern Afghanistan (based on two specimens in the Universitetets Zoologiske Museum from Pashki, identified as this species, but not seen by us).

Family VARANIDAE

Genus **Varanus** Merrem

Varanus MERREM, 1820, Tent. Syst. Amph., p. 58 (type species: *Lacerta varia* Shaw, 1790, by subsequent designation of GRAY, 1827, Phil. Mag., ser. 2, vol. 3, p. 55).

Varanus bengalensis bengalensis (Daudin).

Tupinambis bengalensis DAUDIN, 1802, Hist. nat. Rept., vol. 3, p. 67 (type locality: Bengal; holotype: Paris Museum no. 2179).

Varanus bengalensis, DUMÉRIL and BIBRON, 1836, Erp. Gen., vol. 3, p. 480.

Varanus (Indovaranus) bengalensis bengalensis, MERTENS, 1942, Abh. Senckenberg. Naturf. Ges., no. 466, p. 334.

DISTRIBUTION. From southeastern Iran through West Pakistan and India to Assam and Burma, south to Tharawaddy and the Henzada District, north to Nepal, Bigrani (western Himalayas) and Darjeeling (eastern Himalayas). In



Afghanistan it is known only from the valley of the Kabul River, to elevations of 8600 feet to the north of Jalalabad.

Varanus griseus caspius (Eichwald).

Psammosaurus caspius EICHWALD, 1831, Zool. Spec., vol. 3, p. 190 (type locality: Dardsha Peninsula, east coast of Caspian Sea, USSR).

Varanus (Psammosaurus) griseus caspius, MERTENS, 1954, Senckenberg. Biol., vol. 35, p. 355.

DISTRIBUTION. The species ranges from North Africa through Southwest Asia to northern India. It reaches Rio de Oro in the west and Ambala, Agra, and Narsingarh in the east; northward it extends to the Transcaspien provinces of the USSR. *Varanus g. caspius* ranges from the eastern coast of the Caspian Sea through Central Asian republics of the USSR and southern Kazakhstan, where it is known up to the southern Ust Urt Precipice, coasts and islands of the Aral Sea, east to the Syr Darya Valley and mountains of the Tien Shan and Pamiro-Alai systems. It reaches east to Chubek along the valleys of the Amu Darya and Pyandzh rivers and is found throughout the Plateau of Iran, west to the Zagros Mountains, and southeast to northern Baluchistan. The area west of the Plateau of Iran is occupied by *V. g. griseus*, while *V. g. koniecznyi* is the form to the east. In Afghanistan the known localities are in the Helmand Basin in the southern part of the country, and the valley of the Hari-Rud in the north. It undoubtedly occurs in the lower elevations throughout Afghanistan.

Suborder SERPENTES

Family BOIDAE

Genus **Eryx** Daudin

Eryx DAUDIN, 1803, Hist. nat. Rept., vol. 7, p. 251 (type species: *Boa turcica* Olivier, 1801, by subsequent designation by FITZINGER, 1843, Syst. Rept., p. 24).

Eryx elegans (Gray).

Cursoria elegans GRAY, 1849, Cat. sn. British Mus., p. 107 (type locality: Afghanistan; holotype in British Museum).

Eryx elegans, BLANFORD, 1876, Zool. E. Persia, vol. 2, p. 402.

DISTRIBUTION. Known from Paghman in Afghanistan. According to Terentjev and Chernov (1949, pp. 229-230), *Eryx jaculus czarewskii* Nikolsky, 1916, is a synonym (see also Anderson and Leviton, 1969, p. 51). Stull (1935, p. 407) regarded *E. j. czarewskii* as a synonym of *E. miliaris* (Pallas).

This species is known from the Kopet Dagh in southern Turkmen, USSR, and adjacent northern Iran.

Eryx johnii (Russell).

Boa johnii RUSSELL, 1801, Indian Serp., vol. 2, pp. 18 and 20, pls. 16-17, fig. 1 [pl. 17] (type locality: Tranquebar, India).

Eryx johnii, DUMÉRIL and BIBRON, 1844, Erp. Gen., vol. 6, p. 458.

DISTRIBUTION. Known definitely from the coastal plain of West Pakistan from the Hab River Valley eastward into the Thar Desert and northward in the Indus Valley to central Sind at elevations below 500 feet (Minton, 1966, p. 119). According to Smith (1943, p. 114), it occurs also in Rajputana, Punjab, United Provinces, Baluchistan, and the Northwest Frontier Provinces (West Pakistan). It must be pointed out that the type of *Eryx persicus* Nikolsky, 1907, regarded by Stull (1935, p. 407) and Smith (*loc. cit.*) as a subspecies of *E. johnii*, is from Aguljaschker, Arabistan [=Khuzestan], Iran. There are no further records of the occurrence of either nominal form in the intervening areas of Iran. The single record of *E. johnii* for Afghanistan is that of Murray (1892, p. 71) for Mundi, Hissar, south of Kandahar.

Eryx tataricus (Lichtenstein).

Boa tatarica LICHTENSTEIN, 1823, in EVERSMAUN, Reise nach Buchara, p. 146 (type locality: Aral Sea, USSR).

Eryx tataricus, TERENTJEV and CHERNOV, 1949, Diag. Rept. Amph., p. 230.

DISTRIBUTION. Kazakhstan, Uzbekistan, Turkmen, Tajikistan, western China, Mongolia, Iran, and Afghanistan; from the Aral Sea east to the Altai Mountains, and south to northwestern Baluchistan. It is known from northern Afghanistan, Paghman, and the southern desert region of Afghanistan. Boulenger's records (1889, p. 101) of *E. jaculus* from northwestern Afghanistan probably should be referred to *E. tataricus*.

Family COLUBRIDAE Genus *Boiga* Fitzinger

Boiga FITZINGER, 1826, Neue Class. Rept., pp. 29, 31, 60 (type species: *Coluber irregularis* Merrem, 1820, by original designation).

Boiga trigonata melanocephalus Annandale.

Boiga trigonata var. *melanocephalus* ANNANDALE, 1904, Jour. Asiat. Soc. Bengal, vol. 73, p. 209, pl. 9, figs. 3-4 (type locality: Preso-Baluchistan frontier; 3 syntypes in Indian Museum, Calcutta).

DISTRIBUTION. From western Baluchistan through eastern Iran, southern and western lowland Afghanistan to Uzbekistan and Tajikistan; north in the USSR to the Repetek Station, east to the vicinity of Kurgan-Tyube (Tajikistan).

Genus *Coluber* Linnaeus

Coluber LINNAEUS, 1758 (in part), Syst. Nat., ed. 10, vol. 1, p. 216 (type species: *Coluber constrictor* Linnaeus, 1758, by subsequent designation by Fitzinger, 1843, Syst. Rept., p. 26).

Coluber karelinii Brandt.

Coluber karelinii BRANDT, 1838, Bull. Acad. Imp. Sci. St. Pétersbourg, vol. 3, p. 243 (type locality: borders of Caspian Sea; syntypes: Zoological Institute Leningrad nos. 1695-1700).

DISTRIBUTION. Eastern Iran, Baluchistan in the Quetta-Pishin area, southern lowland Afghanistan, north along the western margin to Turkmen, Uzbekistan, Kirghizia, Tajikistan (east to the Vakhsh Valley and Leninabad), southwestern Kazakhstan. Kaidak Gulf and southern coast of Aral Sea are northernmost known localities (Terentjev and Chernov, 1949, p. 243).

***Coluber ravergieri* Ménétries.**

Coluber ravergieri MÉNÉTRIES, 1832, Cat. rais. Obj. Zool., p. 69 [not seen] (type locality: Baku, Georgia, USSR; holotype in Leningrad).

DISTRIBUTION. Extreme northeastern Africa, through the eastern Mediterranean, including Israel, Lebanon, Syria, Turkey, to Jordan, Iraq, Iran, Georgia, Armenia, Azerbaidzhan, Dagestan, USSR, east through Turkmen and Afghanistan to the mountainous areas of the northern part of Kalat District to Chitral, West Pakistan. In Soviet Central Asia it reaches as far north as the Emba River and the lower reaches of the Syr Darya River; in the northeast it reaches western Mongolia. Afghan localities are in the north and east of the country at elevations of 2000–8000 feet.

***Coluber rhodorachis* (Jan).**

Zamenis rhodorachis JAN, 1863, vol. 1, p. 356 (type locality: Schiraz, Persia).

Coluber rhodorachis, PARKER, 1931, Ann. Mag. Nat. Hist., ser. 10, vol. 8, p. 516.

DISTRIBUTION. Egypt south to Somalia, east through Arabia, Israel, Jordan, Syria, Iraq, Iran, Afghanistan, West Pakistan except Thar Desert and upper Indus basin, north to southern Turkmen, southern Uzbekistan, and western Tajikistan, USSR, no further north than 40° N. According to Terentjev and Chernov (1949, p. 242) the most eastern and northeastern localities are: vicinity of Samarkand and Tashkent, Zeravshan Ridge, surroundings of Stalinabad and Darvaz Ridge. In Afghanistan it is known from lower elevations on both the north and south side of the Hindu Kush.

****Coluber ventromaculatus* Gray and Hardwicke.**

Coluber ventromaculatus GRAY and HARDWICKE, 1834, Illust. Indian Zool., vol. 2, pl. 80, fig. 1 (type locality not stated).

DISTRIBUTION. From Almora, United Provinces south to the Khandesh District near Bombay, India, west through West Pakistan, Iran, Iraq, northern Arabia, and Jordan to Israel. Boulenger (1890, pp. 325–326) includes Afghanistan in the distribution, although we find no documented records. Terentjev and Chernov (1949, p. 242) say that records for this species in the USSR refer to *C. rhodorachis*. Various authors have considered both *C. karelinii* and *C. rhodorachis* as synonyms of *C. ventromaculatus*, and the separation of these forms is far from clear (Leviton, 1959, pp. 454–456).

Genus **Eirenis** Jan

Eirenis JAN, 1863, Arch. Zool., vol. 2, p. 256 (type species: *Coluber collaris* Ménétries, by subsequent designation by SMITH, 1943, Fauna British India, Serp., p. 187).

***Eirenis persica** (Anderson).

Cyclophis persicus JOHN ANDERSON, 1872, Proc. Zool. Soc. London, p. 392 (type locality: Bushire, Iran; holotype in British Museum).

Eirenis persica, STICKEL, 1951, Herpetologica, vol. 7, p. 128.

DISTRIBUTION. The Iranian Plateau, from Jarmo, eastern Iraq, through Iran to the Kopet Dagh in southern Turkmen, east to Swat, Punjab, and western Sind, West Pakistan. As yet there are no Afghan records; it is included here on the basis of its occurrence to the west, south, and east of that country.

Genus **Elaphe** Fitzinger

Elaphe FITZINGER, 1833, in Wagler, J., Descr. Icon. Amphib., vol. 3, text to pl. 27 (type species *E. parreysii* Fitzinger).

Elaphe dione (Pallas).

Coluber dione PALLAS, 1773, Reise russ. Reichs, vol. 2, p. 717 (type locality: "Salt steppes toward the Caspian Sea").

Elaphe dione, DUMÉRIL, BIBRON, and DUMÉRIL, 1854, Erp. Gen., vol. 7, p. 248.

DISTRIBUTION. From the valley of the Volga River, in southeastern Russia through temperate Asia to the Amur country in the north and south through eastern China to Kuikiang (Stejneger, 1907, p. 318). In Afghanistan known from one unpublished record from Bolla-Kuchi village, 6.5 miles southeast of Kunduz, Kunduz Province (USNM 166774-166775).

Genus **Lycodon** Boie

Lycodon H. BOIE, 1826, Ferussac's Bull. Sci. Nat., vol. 9, p. 238 (type species: *Coluber aulicus* Linnaeus, 1758, by subsequent designation by FITZINGER, 1826, Neue Class. Rept., p. 30).

***Lycodon striatus bicolor** (Nikolsky).

Contia bicolor NIKOLSKY, 1903, Ann. Mus. Zool. Acad. Imp. Sci. St. Pétersbourg, vol. 8, pp. 96-97 (syntypes from eastern Iran, and Kukulab, Transcaspia, USSR; syntypes: Zoological Institute Leningrad nos. 10006, 10013).

Lycodon striatus bicolor, CHERNOV, 1935, Compt. Rendu Acad. Sci. URSS, n. ser., vol. 3, p. 189.

DISTRIBUTION. Eastern and northeastern Iran, southern Turkmen, Uzbekistan (exclusive of the Kara-Kalpak ASSR), and western Tajikistan; north to the Chirchik River hydroelectric plant (Terentjev and Chernov, 1949, p. 238). Minton (1966, p. 132) referred a specimen from the vicinity of Quetta, Baluchistan to this subspecies. Thus far there are no Afghan records for this species; it has been taken in the Iranian part of the Seistan Basin, however.

Genus *Lytorhynchus* Peters

Lytorhynchus PETERS, 1862, Monat. Acad. Berlin, p. 273 (type species: *Heterodon diadema* Duméril, Bibron and Duméril, 1854, by monotypy).

Lytorhynchus maynardi Alcock and Finn.

Lytorhynchus maynardi ALCOCK and FINN, 1896, Jour. Asiat. Soc. Bengal, vol. 65, p. 562, pl. 14 (type locality: Koh-Malik-do-Khand, Afghan-Baluchistan frontier; syntypes in the Indian Museum, Calcutta, and British Museum).

DISTRIBUTION. Desert basins of southern Afghanistan and northern Baluchistan, West Pakistan (from Nushki to the Iranian border).

Lytorhynchus ridgewayi Boulenger.

Lytorhynchus ridgewayi BOULENGER, 1887, Ann. Mag. Nat. Hist., ser. 5, vol. 20, p. 413 (type locality: Chinkilok, Afghanistan; holotype in British Museum).

DISTRIBUTION. From southern and central Iran and Turkmen, USSR (east to the Repetek Station) east through northwestern and southern Afghanistan and northern Baluchistan.

Genus *Natrix* Laurenti

Natrix LAURENTI, 1768, Syn. Rept., p. 73 (type species: *Natrix torquatus*, by subsequent designation of Fleming, 1822).

Natrix tessellata tessellata (Laurenti).

Coronella tessellata LAURENTI, 1768, Syn. Rept., p. 87 (type locality: "in Japidia, volgo Cars").

Natrix tessellata, BONAPARTE, 1834, Icon. Faun. Ital., vol. 2, pl.

Natrix tessellata tessellata, SOCHUREK, 1956, Burgenl. Heimatbl. Eisenstadt, vol. 18, p. 89.

DISTRIBUTION. From southern and middle Europe, eastward through the Balkans, Southwest Asia, southern USSR (southern Ukraine, Crimea, Transcaucasian republics, Turkmen, Uzbekistan, Tajikistan, Khirgiz, and Kazakhstan; reaching the lower Ūsa River along the Volga Valley, and north as far as 53–54° N.) to northern and eastern Afghanistan and Chitral, West Pakistan.

Genus *Oligodon* Boie

Oligodon BOIE, 1827, Isis von Oken, p. 519 (type species: *Coluber bitorquatus* Reinwardt, by monotypy).

**Oligodon taeniolatus* (Jerdon).

Coronella taeniolata JERDON, 1853, Jour. Asiat. Soc. Bengal, vol. 22, p. 528 (type locality: Vizagapatam; based on RUSSELL, 1796, Indian Serp., vol. 1, p. 24, pl. 19).

Oligodon taeniolatus, WALL, 1921, Sn. Ceylon, p. 239.

DISTRIBUTION. From Bihar, India, to southeastern Baluchistan, south through peninsular India to Ceylon. It is found in West Pakistan in the lowlands, from the Indus delta north to Rawalpindi, west to Bela (Minton, 1966,

p. 134). It is known in southern Turkmen from a single specimen from the Kopet Dagh (Terentjev and Chernov, 1949, p. 258). No records exist for Afghanistan, but its known distribution suggests that it occurs there in the low deserts of the south and west.

Genus *Psammophis* Fitzinger

Psammophis FITZINGER, 1826, Neue Class. Rept., pp. 29-30 (type species: *Coluber sibilans* Linnaeus, 1758, by original designation).

**Psammophis leithii* Günther.

Psammophis leithii GÜNTHER, 1769, Proc. Zool. Soc. London, p. 505, pl. 39 (type locality: Sind; holotype in British Museum).

DISTRIBUTION. From Fyzabad, in the United Provinces to Poona and west to Waziristan and southeastern Baluchistan. In West Pakistan it is known from Azad Kashmir to the southern Thar and west to Waziristan and southern Kalat District (Minton, 1966, p. 141). No verifiable records exist for Afghanistan; Boulenger's (1889, p. 103) records for Helmand and Hamun to Khusan refer to *Psammophis schokari* (Boulenger, 1896, pp. 157-158).

Psammophis lineolatus (Brandt).

Coluber (Taphrometopon) lineolatus BRANDT, 1838, Bull. Acad. Imp. Sci. St. Pétersbourg, vol. 3, p. 243 (type locality: Transcaspia).

Psammophis lineolatus, SMITH, 1943, Fauna British India, vol. 3, p. 367.

DISTRIBUTION. Turkmen, Uzbekistan, Tajikistan, Khirgiz, Kazakhstan, USSR, to about 49° N., through Mongolia to Kansu and Ala Shan inclusive; south through eastern Iran (west as far as Yezd-i-Khast) and Afghanistan to the Quetta Plateau, Baluchistan, West Pakistan.

Psammophis schokari (Forskål).

Coluber schokari FORSKÅL, 1775, Descr. Anim., p. 14 (type locality: Yemen).

Psammophis schokari, BOULENGER, 1896, Cat. sn. British Mus., vol. 3, pp. 157-158.

DISTRIBUTION. From Morocco across North Africa (south to Somalia) and the entire Arabian peninsula (at least the coastal regions) through Israel, Lebanon, Syria, Jordan, Iraq, Iran, southern Turkmen, southern Afghanistan, and West Pakistan, east to Kashmir, and south to Kutch.

Genus *Ptyas* Fitzinger

Ptyas FITZINGER, 1843, Syst. Rept., p. 26 (type species: *Coluber blumenbachii* Merrem, 1820, by original designation).

Ptyas mucosus (Linnaeus).

Coluber mucosus LINNAEUS, 1758, Syst. Nat., vol. 1, p. 226 (type locality: India; type in Stockholm).

Ptyas mucosus, COPE, 1860, Proc. Acad. Philadelphia, p. 563.

DISTRIBUTION. From the Murgab basin in southern Turkmen, probably locally in eastern Iran, southern Afghanistan (existing records are all in the southeastern portion, including the Kabul River Valley, and between Kabul and Kandahar), West Pakistan, from the lower Indus west to Baluchistan and north to Chitral, throughout India and Ceylon and eastward to southern China and Viet Nam; Formosa; Java, Sumatra, and the Andaman Islands.

Genus *Spalerosophis* Jan

Spalerosophis JAN, 1865, in DE FILIPPI, Viag. in Persia, vol. 1, p. 356 (type species: *Spalerosophis microlepis* Jan 1865, by monotypy).

Spalerosophis diadema schirazana (Jan).

Periops parallelus var. *schirazana* JAN, 1865, in De Filippi, Viag. in Persia, vol. 1, p. 356 (type locality: Persia).

Spalerosophis diadema schirazianus, MERTENS, 1956, Jh. Ver. Naturk. Württemberg, vol. 111, p. 96.

DISTRIBUTION. From the Zagros Mountains of western Iran east through southern Turkmen, Uzbekistan, and western Tajikistan, USSR (extreme locality records being: Vakhsh River; vicinity of Osh; coastline of Kenderli Gulf; and Kyzyl Kum, north of Khoresm oasis [Terentjev and Chernov, 1949, p. 245]), northern lowland Afghanistan, the southern Afghan desert region, north at least to Paghman, and south to Quetta and western Las Bela in Baluchistan.

Xenochrophis piscator: See Addendum, pg. 206.

Family ELAPIDAE

Genus *Naja* Laurenti

Naja LAURENTI, 1768, Synops. Rept., p. 90 (type species: *Naja lutescens* Laurenti, 1768, by subsequent designation by LEVITON, 1967, in BÜCHERL, W., Venomous Animals and their Venoms, p. 547).

Naja oxiana (Eichwald).

Tomyris oxiana EICHWALD, 1831, Zool. Spec., p. 171 (type locality: Transcaspia, USSR).

Naja oxiana, STRAUCH, 1869, Bull. Acad. Imp. Sci. St. Pétersbourg, vol. 13, cols. 81-94.

DISTRIBUTION. Southern Turkmen, Uzbekistan (north to Samarkand and Aristan-Bel-tau mountains), southwestern Tajikistan, USSR; northeastern Iran; Afghanistan (documented records are in the northwest, south, and south of the Hindu Kush); northeastern Baluchistan, Northwest Frontier Provinces, and Kashmir, West Pakistan.

Family LEPTOTYPHLOPIDAE

Genus *Leptotyphlops* Fitzinger

Leptotyphlops FITZINGER, 1843, Syst. Rept., p. 24 (type species: *Typhlops nigricans* Schlegel, 1844, by original designation).

Leptotyphlops blandfordi (Boulenger).

Glaucania blandfordii BOULENGER, 1890, Fauna British India, p. 243 (type locality: Sind; holotype in British Museum).

Leptotyphlops blandfordi, WERNER, 1936, Festschr. Strand, vol. 2, p. 201.

DISTRIBUTION. Known from the Indus delta north through southern Punjab to Sibi and the Northwest Frontier Provinces (Minton, 1966, p. 117). In Afghanistan it occurs in the valley of the Kabul River. Specimens recorded from Kuh-i-Malik Siah, at 5000 feet elevation at the point where the Iranian, West Pakistan, and Afghan borders meet (Alcock and Finn, 1896, p. 561) have not been reexamined by subsequent workers.

Family TYPHLOPIDAE
Genus **Typhlops** Oppel

Typhlops OPPEL, 1811, Ordn. Fam. Gatt. Rept., p. 54 (type species: *Anguis lumbricalis* Linnaeus, 1766 [*vide* SMITH, 1943, p. 43]).

Typhlops vermicularis Merrem.

Typhlops vermicularis MERREM, 1820, Tent. Syst. Amph., p. 158 (type locality: Greek islands; restricted by MERTENS and MÜLLER, 1928, Abh. Senckenb. Naturf. Ges., vol. 41, p. 45).

DISTRIBUTION. Southern Yugoslavia, Albania, southern Bulgaria, Greece, Noxos in the Cyclades, Rhodes, Turkey, Syria, lower Egypt, Israel, Transcaucasian republics of the USSR, Dagestan, southern Turkmen, southern Uzbekistan, southern and western Tajikistan, Iran, and Afghanistan (the only known record being for north of Herat, in the northwest).

Family VIPERIDAE
Genus **Agkistrodon** Beauvois

Agkistrodon BEAUVOIS, 1799, Trans. American Philos. Soc., vol. 4, p. 381 (type species: *Agkistrodon mokasen* Beauvois, 1799, by monotypy).

Agkistrodon halys (Pallas).

Coluber halys PALLAS, 1776, Reise versch. Prov. Russ. Reich, vol. 3, p. 403 (type locality: eastern Naryn Steppe).

Ancistrodon halys, BOULENGER, 1896, Cat. sn. British Mus., vol. 3, pp. 524-525.

DISTRIBUTION. From Azerbaidzhan, northern Iran, and the Trans-Volga region through central Asia and southern Siberia (to about 55-56° N.), to the Pacific. Our inclusion of this species in the Afghan fauna is based on a specimen in the Universitetets Zoologiske Museum, Copenhagen (not seen by us) labeled "Ancistrodon" from the Sauzak Pass near Herat, northwestern Afghanistan.

Agkistrodon himalayanus (Günther).

Halys himalayanus GÜNTHER, 1864, Rept. British India, p. 393, pl. 24, fig. A (type locality: Garwal, western Himalayas; 2 syntypes in British Museum).

Ancistrodon himalayanus, BOULENGER, 1890, Fauna British India, p. 424, fig. 125.

DISTRIBUTION. The western Himalayas, from Sikkin to Chitral, West Pakistan. A specimen labeled "Ancistrodon" (not seen by us) in the Universitetets Zoologiske Museum, Copenhagen, collected at Wama, Nuristan, in eastern Afghanistan, prompt our inclusion of this species in the checklist.

Genus *Echis* Merrem

Echis MERREM, 1820, Tent. Syst. Amph., p. 149 (type species: *Pseudoboa carinata* Schneider, 1801, by subsequent designation by FITZINGER, 1843, Syst. Rept., p. 28).

Echis carinatus (Schneider).

Pseudoboa carinata SCHNEIDER, 1801, Hist. Amph., vol. 2, p. 285 (type locality: Arni; based on RUSSELL, 1796, Indian Serp., vol. 1, pl. 2).

Echis carinata, WAGLER, 1830, Syst. Amph., p. 177.

DISTRIBUTION. Northern Africa south to Ghana in the west, Kenya in the east, through Arabia and Southwest Asia north to Turkmen, southern Uzbekistan (north to Samarkand), and northwestern Tajikistan, east to the Vakhsh Valley inclusive in the USSR, south through Afghanistan and all of West Pakistan exclusive of the Himalayan region, east to the Ganges Valley, and south through drier regions of India, to northern Ceylon. In Afghanistan it occurs in the lower elevations both north and south of the Hindu Kush.

Genus *Eristicophis* Alcock and Finn

Eristicophis ALCOCK and FINN, 1896, Jour. Asiatic Soc. Bengal, vol. 65, p. 564 (type species: *Eristicophis macmahoni* Alcock and Finn, by monotypy).

Eristicophis macmahoni Alcock and Finn.

Eristicophis macmahoni ALCOCK and FINN, 1896, Jour. Asiatic Soc. Bengal, vol. 65, pp. 564-565, pl. 15, figs. 1, 1a (types from Amirchah; Zeh; Drana Koh; Robot I, Afghan-Baluch border).

DISTRIBUTION. The desert basin region of northwestern Baluchistan, West Pakistan, from Nushki westward to the border, and south to Khara; the southern desert of Afghanistan in Registan and the Dasht-i-Margo; Seistan, eastern Iran; below 4000 feet elevation.

Genus *Pseudocerastes* Boulenger

Pseudocerastes BOULENGER, 1896, Cat. sn. British Mus., vol. 3, p. 501 (type species: *Cerastes persicus* Duméril, Bibron and Duméril, 1854, by monotypy).

**Pseudocerastes persicus persicus* (Duméril, Bibron, and Duméril).

Cerastes persicus DUMÉRIL (AHA), 1853, Mém. Acad. Sci. Inst. France, vol. 23, p. 532 (*nomen nudum*); DUMÉRIL, BIBRON, and DUMÉRIL, 1854, Erp. Gen., vol. 7, p. 1443, pl. 78b, fig. 5 (type locality: Persia).

Pseudocerastes persicus, BOULENGER, 1896, Cat. sn. British Mus., vol. 3, p. 501.

DISTRIBUTION. *Pseudocerastes persicus* ranges from the central Sinai peninsula through the Negev in Israel, Jordan, northern Saudi Arabia, Iraq, Iran, and

West Pakistan as far east as Manguli in southwestern Kalat. There is a fragmentary specimen (*P. bicornis* Wall) from Khajeri Kach above Gwaleri Kolal in the Gomal Pass, Waziristan, West Pakistan. This latter record is close to the Afghan border, but while Afghanistan has been included in the distribution of this species by previous authors, we find no documented records.

Genus *Vipera* Laurenti

Vipera LAURENTI, 1768, Synops. Rept., p. 99 (type species: *Vipera redi*, Latreille, by subsequent designation by FITZINGER, 1843, Syst. Rept., p. 28).

Vipera lebetina (Linnaeus).

Coluber lebetinus LINNAEUS, 1758, Syst. Nat., ed. 10, vol. 1, p. 216 (type locality: Cyprus; restricted by MERTENS and MÜLLER, 1928, Abh. Senckenberg. Naturf. Ges., vol. 41, p. 52). *Vipera lebetina*, DAUDIN, 1803, Hist. nat. Rept., vol. 6, p. 137.

DISTRIBUTION. North Africa from Morocco to Tripoli; Cyprus and the Cyclades Islands of the eastern Mediterranean, Turkey, Syria, Lebanon, Israel, Jordan, Iraq, Iran, Transcaucasian republics of the USSR, Dagestan, southern part of Central Asian republics, east to Khorog and northeast to the vicinity of Leninabad, USSR; Afghanistan, West Pakistan (from Waziristan south to the Quetta Plateau), and east to Kashmir. Apart from a recently collected specimen from Jalalabad, in the valley of the Kabul River, eastern Afghanistan, all Afghan records for this species are from the northwestern part of the country.

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Note: The following list includes not only those titles cited in the text but also those principally concerned with the Afghanistan herpetofauna and which serve as a primary source of original locality data. Primary systematic sources include, in addition to those cited below, the references noted in the synonymies in the check list.

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ADDENDUM

**Agamura femoralis* Smith.

Agamura femoralis SMITH, 1933, *Rec. Indian Mus.*, vol. 35, p. 17 (type locality: Kharan, Baluchistan, West Pakistan).

DISTRIBUTION. Northwestern Baluchistan, West Pakistan.

Genus *Alsophylax* Fitzinger

Alsophylax FITZINGER, 1843, *Syst. Rept.*, p. 18 (type species *Gymnodactylus pipiens* Eichwald, by original designation).

Alsophylax cf. *pipiens* (Pallas).

Lacerta pipiens PALLAS, 1811, *Zoogr. Ross-asiatica*, p. 27 (type locality: Mt. Bogdo, near the Volga River, USSR).

Alsophylax pipiens FITZINGER, 1843, *Syst. Rept.*, pp. 18, 90.

DISTRIBUTION. From the lower Volga and Transcaspiya region of the USSR to central Mongolia and the Ala-Schan mountains, south to northern Iran and Afghanistan. In Afghanistan we have seen material only from the vicinity of Kabul (see: Clark, Clark,

Anderson and Leviton, 1969). Mertens (1965, p. 2) reports one specimen from Oukak.

Genus *Xenochrophis* Günther

Xenochrophis GÜNTHER, 1864, Rept. British India, p. 273 (type species: *Psammophis ccrasogaster* Cantor, by monotypy).

Xenochrophis piscator (Schneider).

Hydrus piscator SCHNEIDER, 1799, Hist. Amphib., p. 247 (type locality: "Indiae orientalis," based on Russell's "Neeli Koea").

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Natrix piscator SMITH, 1943, Fauna British India, Serp., p. 293.

Xenochrophis piscator MALNATE, 1965, Proc. Acad. Nat. Sci., Philadelphia, vol. 117, p. 19.

DISTRIBUTION. From Baluchistan, West Pakistan, throughout all of India, Ceylon, central Nepal to 5000 feet, and east throughout the whole of the Indochinese Subregion, Southern China, Malaya and western Indonesia. In Afghanistan, collected 40 km. south-west of Jalalabad.

NOTE. In a recent paper entitled "Notes on the herpetofauna of certain provinces of Afghanistan," (*Zoologische Listy*, vol. 18, pp. 55-66, 1969) Dr. B. Král documents the occurrence of *Psammophis leüthi* in Afghanistan. His specimen came from 8 km. from Jalalabad, toward Sarsahi. He also adds two hitherto unrecorded species to the faunal list of the country: *Oligodon arnensis* (Family Colubridae), and *Bungarus caeruleus* (Family Elapidae).